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RSX-11M-PLUS

Mini-Reference

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RSX-11M-PLUS Version 1.0

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INTRODUCTION

This book is intended as a convenient quick reference for RSX-11M-PLUS system users. Included are summaries of commands and operations for the following systems and facilities:

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INTRODUCTION

Online Help Files

Extensive files of HELP information, for both MCR and DCL as well as other system components, are available to you at your terminal. To display a list of the topics for which help is available, type:

HELP (RET)

Topics are displayed on your terminal, based on your current command line interpreter (MCR or DCL). To obtain information on a topic available from that CLI, type:

HELP topic (RET)

To obtain information a topic from the alternate CLI type:

HELP/MCR topic (RET)

or

HELP/DCL topic (RET)

Type HELP/MCR HELP to obtain information on the modification or construction of new HELP files.

Conventions Used in this Mini-Reference

The following documentation conventions are used in this handbook:

Lowercase letters designate a variable whose value is determined when the command is entered.

Uppercase letters designate a command line element that must be entered as shown.

Square brackets ([]) enclose optional parameters, except for UIC specifications which always require brackets.

Numeric values in commands can be octal or decimal, unless the command description specifies otherwise.

Braces ({ }) indicate that the user can choose any one of the items that are enclosed.

xxx

A one- to three-character symbol indicates that you press a key on the terminal, for example, (RET) or (ESC) .

CTRL/n

The symbol (CTRL/n) indicates that you press the key labeled CTRL while you press another key, for example (CTRL/C) , (CTRL/Y) , (CTRL/O) .

DIGITAL COMMAND LANGUAGE (DCL) COMMANDS

The first group of DCL commands below, the nonprivileged commands, can be issued from any DCL terminal. However, a (P) following a parameter or qualifier indicates that only privileged users can use that form of the command. The second group of commands can only be issued from privileged DCL terminals. Frequently used privileged command formats are included in both sections. DCL requires that you type enough characters in a command to make it unique from other DCL commands. This varies from 1-4 characters. Commands accepting multiple elements in a single field often require enclosing the field in parentheses.

Nonprivileged DCL Commands

ABORT [/COMMAND]

or

ABORT/TASK [taskname]

Qualifiers: **TERMINAL:TTnn:** (P)
 DUMP

Prompt: **COMMAND NAME?**

The ABORT command stops execution of either a command or a task. The DCL default operation aborts a command. The task form of the ABORT command aborts the specified task, running from the user's terminal. If a task name is not used, DCL usually aborts a task activated with the install, run, remove form of the RUN command.

The privileged /TERMINAL qualifier aborts a task run from another user's terminal, and the /DUMP qualifier generates a Postmortem Dump after the task is aborted.

ALLOCATE [/qualifier[s]] dd[nn:] [logicalname]

Qualifiers: **DEVICE ddnn:**
 TERMINAL:TTnn: (P)

Prompt: **DEVICE?**

The ALLOCATE command reserves a physical device for the exclusive use of the user at the terminal issuing the command. Specifying the device as dd: causes DCL to allocate the next device of that type available. Specifying the device unit number (nn:) causes DCL to allocate that specific device. Use of the logical name assigns that name to the physical device allocated. The privileged /TERMINAL qualifier allows the user to allocate a device to any terminal.

DIGITAL COMMAND LANGUAGE (DCL) COMMANDS

APPEND infile[s] [/qualifier] outfile

Qualifiers: INDEXED[/KEY:NUMBER:n]
RELATIVE
SEQUENTIAL

Prompts: FROM?
TO?

The Append command adds one or more input files to the end of an already existing output file. The output file from the Append command is always a sequential file. Several sequential files can be used as input files to a single Append command, but only one relative or indexed file can be appended to an output file each time the command is invoked.

ARCHIVE [/qualifier[s]] source targetdnn:

Qualifiers: APPEND	MAXIMUM:n
BACKUP__SET:name	MOUNTED
BAD:[AUTOMATIC]	NEW__VERSION
[MANUAL]	[NO] INITIALIZE
[OVERRIDE]	NOMERGE
BUFFERS:n	NOPRESERVE
COMPARE	OUTVOLUME:name
CREATED:BEFORE:date	POSITION:BEGINNING
:AFTER:date	:MIDDLE
DENSITY:800	:END
:1600	:BLOCK:n
:LOW	PROTECTION:code
:HIGH	RESTORE
DIRECTORY	REVISED:BEFORE:date
DISPLAY	:AFTER:date
ERRORS:n	REWIND
EXCLUDE	SUPERSEDE
EXTEND:n	TAPE__LABEL:name
HEADERS:n	VERIFY
INVOLUME:name	WINDOWS:n
LENGTH:n	

Prompts: FROM?
TO?

Enables volume and file archiving (back up) and restoration, using the Back-Up and Restore Utility (BRU).

ASSIGN [/qualifier[s]] physicaldevice logicaldevicename

Qualifiers: GLOBAL (P)
LOCAL
LOGIN (P)
TERMINAL:DDnn: (P)

Prompts: DEVICE?
LOGICAL NAME?

Establishes logical device assignments. The default is LOCAL. All other formats are privileged.

ASSIGN/REDIRECT oldddnn: newddnn: (P)

Prompts: FROM?
TO?

Redirects an I/O request from one physical or pseudodevice to another.

ASSIGN/TASK:taskname ddnn:logicalunitnumber (P)

Prompt: LOGICAL UNIT?

Associates a logical name with a physical device.

ASSIGN/QUEUE (P)

Prompts: QUEUE NAME?
PROCESSOR NAME?

Creates a path for print or batch jobs from a queue to a processor.

BASIC [/qualifier]

Qualifiers: B11
BP2
USING:userbasicsystem

Invokes the resident BASIC language translator on the system or a user-written BASIC language translator.

DIGITAL COMMAND LANGUAGE (DCL) COMMANDS

CANCEL taskname

Prompt: TASK?

Cancels a request for time-based initiation of a task. Privileged users can cancel any task, but nonprivileged users can only cancel tasks initiated from their terminal.

COBOL [/qualifier[s]] filespec[s]

Qualifiers: [NO]LIST [:filespec]
[NO]OBJECT [:filespec]
SWITCHES: (/switches)
USING:usercobolsystem

Switches: ACC:n NL
CREF OBJ
CSEG:n ODL
CVF OV
ERR:n PFM:n
HELP PLT
KER:kk RO
MAP SYM:n

Prompt: FILE?

Invokes the resident COBOL compiler or a user-written COBOL compiler.

CONTINUE [/qualifier] taskname

Qualifier: TERMINAL:ddnn: (P)

Continues execution of a previously suspended task. The Terminal qualifier allows the privileged user to continue to execute tasks run from any terminal. If no task name is used, CONTINUE starts the task initiated by the last RUN command.

COPY [/qualifier[s]] (infile[/SEQUENTIAL],...) outfile

Command BLOCKSIZE:n
Qualifiers: CONTIGUOUS
OWN
REPLACE
[NO]SPAN_BLOCKS

COPY [/REPLACE] infile [/qualifier] outfile

Infile INDEXED [/KEY:NUMBER:n]
Qualifiers: RELATIVE
Prompts: FROM?
 TO?

Creates one sequential copy of the records in an indexed or relative file or of a series of sequential files. The Replace form of the command causes COPY to replace the exact file specified, or the latest version, with the file being copied.

CREATE [/qualifier[s]] filespec

Qualifiers: ALLOCATION:n
 BUCKETSIZE:n
 CONTIGUOUS
 FORMAT:[CONTROLLED]
 [FIXED]
 [VARIABLE]
 INDEXED
 KEY
 PROTECTION:code
 RELATIVE
 SEQUENTIAL
Prompt: FILE?

Creates a file on a file-structure volume. The Sequential qualifier is the default. If you create a sequential file, it is open for terminal input until you type **CTRL/Z** .

CREATE/DIRECTORY [/qualifier[s]] [ddnn:]/[[ufd]]

Qualifiers: ALLOCATION:n
 PROTECTION:coden
 VOLUMELABEL:volumelabel
Prompt: DEVICE AND/OR DIRECTORY?

Creates an entry in the Master File Directory (MFD). The Allocation qualifier specifies the number of directory entries for which space is allowed. The Protection qualifier sets access rights for the specified file. The volume label qualifier compares the specified volume with the label on the physical volume.

DIGITAL COMMAND LANGUAGE (DCL) COMMANDS

DEALLOCATE [/DEVICE] ddnn:

Qualifiers: DEVICE
 TERMINAL (P)

Prompt: DEVICE?

Releases a device previously allocated privately to a user.

DEASSIGN [/qualifier[s]] [logicalname]

Qualifiers: ALL
 GLOBAL (P)
 LOCAL
 LOGIN (P)
 TERMINAL:ddnn: (P)

Prompt: LOGICALNAME?

Disassociates a logical device assignment. The default is LOCAL.

DEASSIGN/QUEUE queueName processorName (P)

Prompts: QUEUE NAME?
 PROCESSOR NAME?

Deletes the path between a queue and a processor that was created with the DCL command ASSIGN/QUEUE.

DELETE [/qualifier[s]] filespec[s]

Qualifiers: DIRECTORY__ENTRY
 LIST
 SELECTIVE

Prompt: FILE?

Deletes one or more files from a UFD.

DELETE/QUEUE queueName jobName

DELETE/QUEUE ENTRY: (m,n)

DELETE/QUEUE queueName /ERASE

DELETE/PROCESSOR processorName

DELETE/APPLICATIONS__PROCESSOR

The DELETE/QUEUE commands delete jobs from batch or print queues or delete the queues themselves. DELETE/PROCESSOR deletes

DIGITAL COMMAND LANGUAGE (DCL) COMMANDS

a print, batch, or applications processor. DEVICE, PRINTER, or BATCH_PROCESSOR can be used in place of PROCESSOR in the command. APPLICATIONS_PROCESSOR is used with output devices that are software applications instead of physical devices.

DIFFERENCE [/qualifier[s]][filespec[s]]

Qualifiers:	BLANK_LINES	NONUMBERS
	CHANGE_BAR	NOTRAILING_BLANKS
	FORM_FEED	OUTPUT:filespec
	IGNORE_SPACING	SLP [:au]
	LINES:n	VERTICAL_BAR:n
	NOCOMMENTS	
Prompts:	FILESPEC1?	
	FILESPEC2?	

Compares the contents of two files and creates a report on the differences.

DIRECTORY [/qualifier[s]] [filespec[s]]

Qualifiers:	ATTRIBUTES
	BRIEF
	FREE[ddnn:]
	FULL
	OUTPUT:filespec
	PRINT
	SUMMARY

Displays directory information on the files specified. The default provides information on all files in the UFD. The /FREE qualifier displays the available free space on SY: or the volume named.

DISMOUNT [/qualifier[s]] ddnn: [volumelabel]

Qualifiers:	DEVICE ddnn: (P)
	[NO]UNLOAD
	SAVE (P)
	TERMINAL:ddnn: (P)
	USER
Prompt:	DEVICE?

Declares that the volume specified is logically offline.

DIGITAL COMMAND LANGUAGE (DCL) COMMANDS

EDIT [/qualifier] [commandline]

Qualifiers: EDI
EDT
MAKE
MUNG
SLP
SOS
TECO
USING:usereditor

Invokes an editor and optionally passes parameters to it. The default editor is EDI. The /USING qualifier gives access to a user-written editor.

FORTRAN [/qualifier[s]] filespec[s]

Qualifiers: F4P
FOR
[NO]LIST
[NO]OBJECT
SWITCH(ES):[switch(es)]
USING:userfortransystem

FOR	DE	F4P	CK
Switches:	EX	Switches:	CO:n
	ID		DE
	I4		ID
	LI:n		I4
	OP		LA
	SN		LI:n
	VA		TR:xxx
	WR		RO

Prompt: FILE?

Invokes the specified FORTRAN compiler or a user-written FORTRAN compiler.

DIGITAL COMMAND LANGUAGE (DCL) COMMANDS

HELP/[qualifier[s]] topic

Qualifiers: /DCL
/MCR
/UNS

Displays information about commands and qualifiers. The information comes from the system help files specified from the qualifiers or from user-created help files.

HOLD/QUEUE queueName jobName or

HOLD/QUEUE ENTRY:(m,n)

Prompts: QUEUE?
JOBNAME?

The HOLD/QUEUE command retains a job in a queue where it cannot be processed until it is explicitly released.

INITIALIZE/[qualifier[s]] ddnn:volumelabel

Qualifiers: CHARACTERISTICS: [ATTACH]
[DCF]
DENSITY:800
:1600
:HIGH
:LOW
EXTENSION:n
HEADERS:n
INDEX:BEGINNING
:MIDDLE
:END
:BLOCK:n
MAXIMUM:n
[NO]VERIFIED
OWNER:[UIC]
PROTECTION:(code)
VOLUME__PROTECTION:(code)
WINDOW:n

Prompts: DEVICE?
VOLUME LABEL?

Produces a FILES-11 structured volume. Nonprivileged users can only initialize volumes on their own private device, but privileged users can initialize any device.

DIGITAL COMMAND LANGUAGE (DCL) COMMANDS

LIBRARIAN

Prompts: OPERATION?
LIBRARY?
MODULES?

The Librarian commands described below create, maintain, and delete object modules and MACRO-11 libraries.

LIBRARIAN CREATE [/qualifier[s]] libspec [filespec[s]]

Qualifiers: EPT:n
MNT:n
NOENTRYPOINTS
SELECT__SYMBOLS
SIZE:n
SQUEEZE
TYPE [:MACRO]
[:OBJECT]

Prompts: MODULES?
NEW LIBRARY?

Creates a library file and optionally inserts one or more modules into it.

LIBRARIAN DELETE [/MODULES] libspec modulelist

or

LIBRARIAN DELETE/GLOBAL__SYMBOLS libspec entryptointlist

Qualifiers: GLOBAL__SYMBOLS
MODULES

Prompt: LIBRARY?

Deletes either modules or entry points from a library file. A modulelist or entryptoint list can contain up to 15 elements, separated by a colon or a space.

LIBRARIAN EXTRACT/OUTPUT:filespec libspec modulelist

Qualifier: TABLE

Reads one or more modules from a library file and writes them to a specified output file.

LIBRARIAN INSERT [/qualifier [s]] libspec filespec[s]

Qualifiers: NONENTRYPOINTS
SELECT__SYMBOLS
SQUEEZE

Prompt: LIBRARY?

Inserts one or more files as modules into a library file.

LIBRARIAN LIST [/qualifier[s]] libspec

Qualifiers: ENTRIES
FULL
OUTPUT:filespec

Prompt: LIBRARY?

Produces a listing of the names of all modules in the library file.

LIBRARIAN REPLACE [/qualifier[s]] libspec filespec[s]

Qualifiers: NOENTRYPOINTS
SELECT__SYMBOLS
SQUEEZE

Prompt: LIBRARY?

Overwrites one or more files as modules in a library file.

LIBRARIAN SQUEEZE [/qualifier[s]] libspec [newlibspec]

Qualifiers: EPT:n
MNT:n
SIZE:n

Physically deletes all logically deleted records, putting all free space at the end of the file and making the free space available for new library module inserts.

DIGITAL COMMAND LANGUAGE (DCL) COMMANDS

LINK [/qualifier[s]] [filespec[/qualifier[s]]]

Command	ANCILLARY__PROCESSOR[:n]
Qualifiers:	BASIC
	CHECKPOINT:SYSTEM
	:TASK
	COMPATIBILITY__MODE
	CROSS__REFERENCE
	DEBUG[:filespec]
	DUMP
	EXTENDED__ARITHMETIC
	FAST
	FLOATING__POINT
	FULL__SEARCH
	LONG
	MAP[:filespec]
	[NO]HEADER
	[NO]MEMORY__MANAGEMENT
	[NO]MULTIUSER
	[NO]SYSTEM__LIBRARY__DISPLAY
	OPTIONS (see below)
	POSITION__INDEPENDENT
	PRIVILEGED[:n]
	SYMBOLS[:filespec]
	[NO]RECEIVE
	[NO]RESIDENT__OVERLAY
	SEQUENTIAL
	SLAVE
	SLOW
	STOP:n
	SYMBOLS[:filespec]
	[NO]TASK[:taskname]
	TKB
	TRACE
	WIDE__MAP
File	[NO]CONCATENATED
Qualifiers:	[NO]GLOBAL__SYMBOLS
	SELECT__SYMBOLS
	DEFAULT__LIBRARY
	LIBRARY[:module: . . . :module]

DIGITAL COMMAND LANGUAGE (DCL) COMMANDS

Options:	ABORT	FMTBUF	PAR	TASK
	ABSPAT	GBLDEF	PRI	TASKV
	ACTFIL	GBLPAT	RESCOM	UIC
	ASG	GBLREF	RESLIB	UNITS
	COMMON	GBLXCL	RESSUP	VSECT
	CMPRT	LIBR	ROPAR	WNDWS
	EXTSCT	MAXBUF	STACK	
	EXTTSK	ODTV	SUPLIB	

Prompt: FILE?

Links object modules to form a task that can be installed and run.

LOGIN [userid]

Prompts: USERID?
PASSWORD?

Allows the user to gain access to the system.

LOGOUT

Terminates a user session on the terminal.

MACRO[/qualifier[s]] filespec[/qualifier[s]]

Command [NO]LIST[:listfilespec]
Qualifiers: [NO]OBJECT[:objectfilespec]
CROSS__REFERENCE
USING:userassembler
SWITCHES:(/switches)

Switches: LI:
NL:
EN:
DS:

File PASS:n
Qualifiers: LIBRARY

Prompt: FILE?

Assembles one or more MACRO-11 source files into object modules or assembles files for a user-written assembler, with the /USING qualifier.

MCR mcrcommand

Prompt: MCR COMMAND?

Allows the DCL user to enter one MCR command and pass control to MCR. When the command is executed control is returned to DCL.

MERGE[/qualifier] infile[/qualifier] outfile[/qualifier]

Command
Qualifier: LOG[:logfilespec]
Infile
Qualifiers: INDEXED [/KEY:NUMBER:n]
RELATIVE
SEQUENTIAL
Outfile
Qualifiers: BLOCKSIZE
INDEXED
TRUNCATE
PAD[:NUMBER:n]
RELATIVE
TRUNCATE
Prompts: FILE?
INTO?

Places records in an indexed or relative file.

MESSAGE[/qualifier[s]] messagetext

Qualifier[s]: TERMINAL:TTnn:
ALL (P)
LOGGED_ON (P)
Prompt: MESSAGE?

Displays the message specified on another user's terminal. Nonprivileged users can send messages to one other terminal, but privileged users can send messages to all terminals or to all logged-in terminals simultaneously. Note that the command does not prompt for destination. If no destination is specified the default is COO:.

MOUNT[/qualifier[s]] volumename ddnn:[volumelabel]

Qualifiers: ACP:acpname
 DENSITY:1600
 :800
 :HIGH
 :LOW
 EXTENSION:n
 FILE_CONTROL_BLOCKS
 FOREIGN
 [NO]LOAD
 OVERRIDE:EXPIRATION_DATE (P)
 :IDENTIFICATION (P)
 OWNER:[uic]
 PARAMETERS:"text"
 PROTECTION:(code)
 SAVE (P)
 SHOW
 UNLOCKED_INDEX
 WINDOW:n

Prompts: DEVICE?
 VOLUME ID?

Declares a volume to be logically connected to the system (online) and ready for use.

PRINT[/qualifier[s]] filespec[s] [/qualifier[s]]

Command	AFTER:(date-time)	NAME:jobname
Qualifiers:	COPIES:n	[NO]ORIGINAL
	[NO]DELETE	[NO]RESTART
	DEVICE:ddnn:	[NO]WIDE
	[NO]FLAG_PAGE	PAGES:n
	FORMS:n	PRIORITY:n
	HOLD	QUEUE:queuenam
	LENGTH:n	UPPERCASE
	LOWERCASE	
File	COPIES:n	
Qualifiers:	[NO]DELETE	
	[NO]ORIGINAL	

Prompt: FILE?

Sends the specified file(s) to the line printer.

DIGITAL COMMAND LANGUAGE (DCL) COMMANDS

PURGE[/qualifier[s]] filespec

Qualifiers: KEEP:n
 LIST

Prompt: FILE?

Deletes all but the latest version by number of the specified file from the directory.

RELEASE/QUEUE queuename jobname

or

RELEASE/QUEUE ENTRY:(m,n)

Prompts: QUEUE?
 JOBNAME?

Releases a job that has been held in a queue.

RENAME oldfilespec newfilespec

Prompts: OLD?
 NEW?

Changes the name of an existing file.

RUN[/qualifier[s]] taskname

or

RUN[/qualifier[s]] filename

Qualifiers: DELAY:n (P)
 EXTENSION:n
 INTERVAL:n
 PARTITION:pname (P)
 PRIORITY:n (P)
 SCHEDULE:hh:mm:ss (P)
 SYNCHRONIZE:timeunit (P)
 :hours
 :minutes
 :ticks
 :seconds

 TASK:taskname
 UIC:[uic]
 [NO]CHECKPOINT

DIGITAL COMMAND LANGUAGE (DCL) COMMANDS

Prompts: TASK?
FILE?

The privileged time-oriented qualifiers schedule installed tasks in the clock queue. All other RUN commands initiate the execution of a task.

RUN/DRIVER[/qualifier] devicegenericname (P)

Qualifier: PARTITION:pname

Prompt: DEVICE?

The RUN/DRIVER form of the command loads a nonresident driver into memory and runs it.

SET function[/qualifier[s]]

Qualifiers: BUFFER_POOL (P)
[DAY]TIME (P)
DEFAULTS
EXTENSION_LIMIT (P)
LIBRARY_UFD (P)
[NO]DEBUG
[NO]LOGINS (P)
PACKETS (P)
PRIORITY (P)
QUEUE
SYSTEM_UFD (P)
TERMINAL

Prompt: FUNCTION?

Sets a parameter for the command function specified.

SET DEVICE:ddnn:keywords (P)

Keywords: WIDTH:value
[NO]WRITECHECK
[NO]PUBLIC
[NO]CHECKPOINT_FILE
[NO]LOWER

Prompts: DEVICE?
ATTRIBUTE?

Sets one of the listed attributes of a device.

DIGITAL COMMAND LANGUAGE (DCL) COMMANDS

SET GROUPFLAGS qualifier [groupnumber]

Qualifiers: CREATE
DELETE

Prompts: ACTION?
GROUP NUMBER?

Creates and deletes global event flags which can be shared by all of the members of a UFD group. Creating and deleting flags for a group other than the user's is a privileged command.

SET PACKETS n (P)

Prompt: VALUE?

Allocates the number of preallocated I/O packets in the system.

SET PARTITION/NOPARTITION [pname] (P)

Prompts: BASE?
NAME?
SIZE?
TYPE?

Types: SYSTEM
DEVICE
DIAGNOSTIC

Creates a system or device partition within the system memory.

SET PROTECTION filespec:code

Prompts: PROTECTION?
FILE?

Changes the file protection mask of the specified files.

SET QUEUE[/qualifier] queuename jobname action

Qualifiers: AFTER:(dd-mmm-yy hh:mm) [NO]RESTART
 FORMS:n [NO]WIDE
 LENGTH:n PAGES:n
 LOWERCASE PRIORITY:n
 [NO]FLAG_PAGE UPPERCASE
 [NO]PRINT

Prompts: QUEUE?
 JOBNAME?
 ACTION?

Changes one or more attributes of a job in one of the system queues.

SET SWITCH_REGISTER value [qualifier] (P)

Qualifiers: CLEARBIT
 SETBIT

Prompt: VALUE?

Sets the value of the software switch register on a multiprocessor system.

SET TERMINAL[/attribute]

or

SET TERMINAL[:ddnn:] [TYPE:devicename]

Attributes: DCL [NO]PASSALL
 FULL_DUPLEX [NO]PRIVILEGED
 HARDCOPY [NO]REMOTE
 HFILL [NO]SCOPE
 MCR [NO]SLAVE
 MODEL [NO]TAB
 [NO]ECHO [NO]TYPE_AHEAD
 [NO]EIGHTBIT [NO]UPPER_CASE
 [NO]ESCAPE [NO]VFILL
 [NO]FORM_FEED [NO]WRAP
 [NO]HOLD_SCREEN PAGE
 [NO]INTERACTIVE SPEED:(t,r)
 [NO]LOCAL UNKNOWN
 [NO]LOWER_CASE

DIGITAL COMMAND LANGUAGE (DCL) COMMANDS

Device	ASR33	LA36
Names:	ASR35	VT05B
	KSR33	VT100
	LA120	VT50
	LA180S	VT52
	LA30P	VT55
	LA30S	VT61

Sets attributes of a terminal, either the terminal entering the command if nonprivileged or any terminal if privileged.

SHOW[/function]

Function: ACCOUNTING
ASSIGNMENTS
BUFFER_POOL
CLOCK_QUEUE
COMMON_BLOCK_DIRECTORY
[DAY]TIME
DEFAULTS
DEVICES
EXTENSION_LIMIT
GROUPFLAGS
LIBRARY_UFD
LOGICAL_UNITS
MEMORY
PACKETS
PARTITIONS
PROCESSOR
QUEUE
SWITCH_REGISTER
SYSTEM_UFD
TASKS
TIME
USERS

Displays the current status of the indicated function on the user's terminal.

SHOW ASSIGNMENTS:qualifier

Qualifiers: GLOBAL (P)
LOCAL
LOGIN (P)
TERMINAL:ddnn: (P)

Shows the values assigned to the specified terminal or to the terminal entering the command on the basis specified (local, login, or global).

SHOW COMMON_BLOCK_DIRECTORY [commonname [TASKS]]

Displays resident commons installed in the system.

SHOW DEVICES [keyword]

Keywords: [NO]PUBLIC
[NO]WRITECHECK
WIDTH:ddnn:
LOGIN
TYPE:ddnn:

Shows the devices on the system set to the value specified.

SHOW QUEUE ALL option[s]

SHOW QUEUE ENTRY:(m,n)

SHOW QUEUE [queue name] [/option[s]]

Options: ALL
BATCH
BRIEF
FORMS
FULL
NAME
NUMBER
PRINT
PRIORITY
USER

Displays the status of all queues in the system.

DIGITAL COMMAND LANGUAGE (DCL) COMMANDS

SHOW TASKS {ACTIVE }[/qualifier]
 {INSTALLED}

or

SHOW TASKS {ACTIVE }taskname
 {INSTALLED}

Qualifiers: ALL
 BRIEF
 FULL
 TERMINAL:ddnn:

Prompt: ACTIVE OR INSTALLED?

Shows the indicated tasks on the system.

SHOW TERMINAL [attribute]

Attributes: DCL	[NO]UPPER_CASE
FULL__DUPLEX	[NO]VFILL
HARDCOPY	[NO]WRAP
HFILL	PAGE
MCR	SPEED:(t,r)
MODEL	TAB
[NO]ECHO	UNKNOWN
[NO]EIGHT__BIT	ASR33
[NO]ESCAPE	ASR35
[NO]FORM__FEED	KSR33
[NO]HOLD__SCREEN	LA120
[NO]INTERACTIVE	LA180S
[NO]LOCAL	LA30P
[NO]LOWER__CASE	LA30S
[NO]PASSALL	LA36
[NO]PRIVILEGED	VT05B
[NO]REMOTE	VT100
[NO]SCOPE	VT50
[NO]SLAVE	VT52
[NO]TAB	VT55
[NO]TYPE__AHEAD	VT61

Displays the terminals with the indicated function on the user's terminal.

SORT KEYS:(abm,n,...)[/qualifier[s]] filespec[/INDEXED:n]/FORMAT:

Formats: FIXED:n
 STREAM:n
 UNKNOWN:n
 VARIABLE:n

Qualifiers: ALLOCATION:n
 BLOCKSIZE:n
 BUCKETSIZE:n
 DEVICE:devicename[:devicename/switch[es]]
 FILES:n
 SIZE:n
 [NO]CONTIGUOUS
 OUTPUT:filespec
 PROCESS:ADDRESS ROUTING
 :INDEX
 :RECORD
 :TAG
 RELATIVE
 SEQUENTIAL

Switches: ALLOCATION:n
 SIZE:n
 [NO]CONTIGUOUS

Prompt: FILE?

Sorts the contents of a file.

SUBMIT[/qualifier] filespec[/qualifier]

Command AFTER:(mm-ddd-yy hh:mm)
Qualifiers: [NO]HOLD
 NAME:jobname
 [NO]ORIGINAL
 [NO]PRINT
 [NO]RESTART
 PRIORITY:n
 QUEUE:queue name

File
Qualifier: [NO]ORIGINAL
Prompt: FILE?

Sends an indirect command file containing batch processing commands to the batch processor.

DIGITAL COMMAND LANGUAGE (DCL) COMMANDS

TYPE filespec(s)

Prompt: FILE?

Causes the specified file(s) to be displayed at the user's terminal.

UNLOCK filespec(s)

Prompt: FILE?

Unlocks the specified file and permits access to it.

Privileged DCL Commands

The following DCL commands can be issued from privileged terminals. (If the command format is followed by (P), all forms shown are privileged.)

ASSIGN[/qualifier] devicename logicaldevicename

Qualifiers: GLOBAL (P)
LOGIN (P)
TERMINAL (P)
LOCAL

Prompts: DEVICE?
LOGICAL NAME?

Makes logical device assignments. The default is LOCAL.

ASSIGN/REDIRECT

or

ASSIGN/REDIRECT olddevicename newdevicename

Prompts: FROM?
TO?

Directs I/O that was previously directed to one physical device or pseudo-device to another device.

ASSIGN/QUEUE (P)

Prompts: QUEUE NAME?
PROCESSOR NAME?

Creates a path for print or batch jobs from a queue to a processor.

ASSIGN/TASK:taskname ddnn: logicalunitnumber

Prompt: LOGICAL UNIT?

Reassigns a task's logical unit number from one physical device to another.

CREATE/DIRECTORY[qualifier] [ddnn:] [UFD]

Qualifiers: ALLOCATION:n
PROTECTION:code
VOLUME__LABEL:volumelabel

Prompt: DEVICE AND/OR DIRECTORY?

Creates a UFD on the specified device and enters its name in the Master File Directory (MFD).

DEASSIGN[/qualifier] logicalname

Qualifiers: ALL (P)
GLOBAL (P)
LOGIN (P)
LOCAL
TERMINAL:TTnn: (P)

Prompt: LOGICALNAME?

Disassociates a logical name from a physical device (or pseudodevice). The name was originally supplied with an ASSIGN command.

FIX[/qualifier] taskname (P)

Qualifiers: READONLY
REGION

Prompt: TASK?

Loads and locks a task into a position in memory.

INITIALIZE/QUEUE queueename[/PRINT] (P)
/BATCH (P)

INITIALIZE/PROCESSOR processorname[/qualifier[s]]

Qualifiers: FLAG__PAGE:n
FORMS:n
LOWERCASE
UPPERCASE

The INITIALIZE/QUEUE and INITIALIZE/PROCESSOR commands

DIGITAL COMMAND LANGUAGE (DCL) COMMANDS

make the queues and processors known to the queue manager. This is generally all done in the system startup command file.

Note that /DEVICE, /PRINTER, and /BATCH__PROCESSOR are all synonyms for /PROCESSOR for the sake of clarity. Also, the device name ddnn: may be used in place of the processor name, ddnn, when applicable, for the same reason.

Use /APPLICATIONS__PROCESSOR instead of /PROCESSOR when the output device is not a physical device but rather some software application.

INSTALL[/qualifier[s]] taskname (P)

Qualifiers: [NO]CHECKPOINT
EXTENSION:n
PARTITION:partitionname
[NO]DUMP
[NO]SLAVE
PRIORITY:n
TASK:taskreferencename
UIC:[uic]

Prompt: FILE?

Enters tasks in the System Task Directory (STD). These tasks are dormant until the Executive receives a request for them to run.

REMOVE[/qualifier] taskname (P)

Qualifier: REGION

Prompt: TASK?

Removes a task entry from the System Task Directory (STD). The task was originally fixed in memory with a FIX command.

START[/TERMINAL:ddnn:] [taskname] (P)

START/QUEUE queuename (P)

START/QUEUE/MANAGER (P)

START/PROCESSOR processorname[/ALIGN] [/qualifier] (P)

Qualifiers: FORMS:n
FLAG__PAGE:n
CONTINUE
NEXT__JOB
BACKSPACE:n
FORWARDSpace:n
RESTART
TOP__OF__FILE
AT__PAGE:n

Prompt: **PROCESSOR NAME?**

The **START/QUEUE** and **START/PROCESSOR** commands start queues or processors that were stopped with the **STOP/QUEUE** or **STOP/PROCESSOR** command. The **START/TERMINAL** command starts a previously stopped task.

STOP/QUEUE *queuename* (P)

STOP/QUEUE/MANAGER

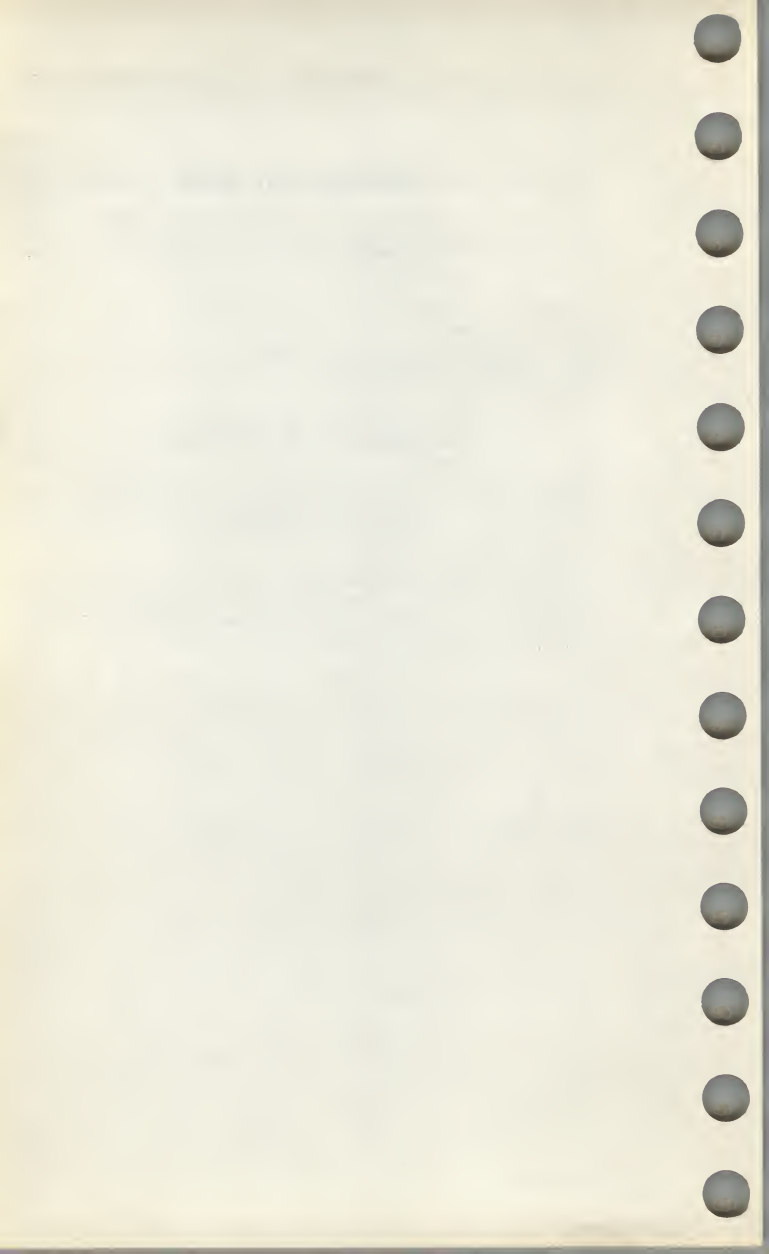
STOP/PROCESSOR *processorname*[/*qualifier*]

STOP[/TERMINAL:*ddnn*:] [*taskname*]

Qualifiers: **ABORT**
 FILE__END
 JOB__END
 PAUSE

STOP/QUEUE starts a stopped queue and allows jobs to be dequeued from it. **STOP/QUEUE/MANAGER** shuts down the queue manager, batch processor, and spooling. **STOP/PROCESSOR** stops a print or batch processor.

The **STOP/TERMINAL** command stops the execution of a task. If a task-name is not specified, the task running from the terminal entering the **STOP** command is stopped. The Terminal qualifier allows a privileged user to stop a task running from any other terminal.



MONITOR CONSOLE ROUTINE (MCR) COMMANDS

The first group of MCR commands below, the nonprivileged commands, can be issued from any MCR terminal. However, a (P) following a parameter or qualifier indicates that only privileged users can use the form of the command. The second group of commands can be issued only from privileged MCR terminals. Nonprivileged commands can be issued by any user.

Most MCR commands require only that the first three letters of the command be entered at the terminal. The optional portion of each command below is enclosed in square brackets.

Nonprivileged MCR Commands

ABO[RT] taskname[/keyword]

Keywords: PMD
TERM = TTnn: (P)

Terminates execution of the specified task. All users can generate a Postmortem Dump with the PMD keyword.

ACT[IVE] [/keyword]

Keywords: ALL
TERM = TTnn:

Displays on the terminal all tasks issued from that terminal or all tasks active in the system.

ALL[OCATE] dd[nn:] [keyword]

Keywords: = llnn:
/TERM = TTnn: (P)

Establishes the specified device as the user's private device on multiuser protection systems. Privileged users can allocate a device on any terminal, using the TERM keyword, but nonprivileged users can only allocate devices to their own terminals. The llnn: keyword allows the user to equate a physical device with a logical device. Specifying the command with only a 2-character abbreviation allocates the first free device of the type specified.

MONITOR CONSOLE ROUTINE (MCR) COMMANDS

Assign **ASN**
ASN [ppnn = llnn:[/keyword]] (P)

Keywords: **GBL (P)**
 LOGIN (P)
 TERM = TTnn: (P)

The command by itself displays all local and login logical device assignments. The command with accompanying keywords and qualifiers defines, displays, or deletes logical device assignments as follows:

Local assign operations

ASN ppnn = llnn:
ASN ppnn = llnn:/LOGIN[/TERM = TTnn:] (P)

Login assign operations

ASN ppnn = llnn:/LOGIN (P)
ASN ppnn = llnn:/LOGIN[/TERM = TTnn:] (P)

Global assign operations

ASN ppnn = llnn:/GBL (P)

Local display operations

ASN

Login display operations

ASN /TERM = TTnn: (P)

Global display operations

ASN /GBL (P)

Login delete operations

ASN = /LOGIN[/TERM = TTnn:] (P)
ASN = llnn:/LOGIN[/TERM = TTnn:] (P)
ASN = /TERM = TTnn: (P)
ASN = [/llnn:]/TERM = TTnn: (P)

Global delete operations

ASN = /GBL (P)
ASN = [/llnn:]/GBL (P)

MONITOR CONSOLE ROUTINE (MCR) COMMANDS

Active Task List ATL [taskname]

Displays on the entering terminal the name and status of all active tasks in the system or the status of the particular task specified.

BRO[ADCAST]TTnn:message

BRO[ADCAST]@filespec

BRO[ADCAST]ALL:message (P)

BRO[ADCAST]LOG:message (P)

Displays the specified message at one terminal for a nonprivileged command or at a number of terminals for a privileged command.

BYE

Logs the user off a multiuser protection system.

CAN[CEL] taskname

Cancels time-based initiation of a task. Privileged users can cancel any task but nonprivileged users can only cancel tasks that they initiated.

Common Block Directory CBD [common region name[/keyword]]

Keyword: TASKS

Displays information about all entries in the Common Block Directory or about the entry specified.

DEA[LLOCATE] [ddnn:]

Releases a private (allocated) device when ddnn: is the device name and unit number. (This command can only be used on systems that support multiuser protection.) Privileged users can deallocate any device but nonprivileged users can only deallocate devices that they have allocated. If no device is specified, the command deallocates all of the user's allocated devices.

DEV[ICES][[/keyword]]

**Keywords: dd:
LOG**

Displays symbolic names of all devices or of all devices of a particular type known to the system. The LOG keyword displays logged-in terminals, along with the login and default UICs.

MONITOR CONSOLE ROUTINE (MCR) COMMANDS

Dismount **DMO ddnn:[label] [/keyword[s]]**

Keywords: DEV (P)
USER
TERM = TTnn: (P)
LOCK = option

Options: V[IRTUAL]
S[OFTWARE]
H[ARDWARE]

Tells the file system to mark the volume for dismount and to release the control blocks. Privileged users can dismount any volume, but nonprivileged users can only dismount devices that they have mounted.

Group Global Event Flags FLA[GS] [ggg/keyword]

Keywords: CRE
ELIM

For privileged users, creates or eliminates global event flags for any group. For nonprivileged users, creates or eliminates group global flags only for their own group. The ggg represents the group number for which flags are created.

```
HEL[LO] uic /PASSWORD
username
```

HEL[LO]
ACCOUNT OR NAME: uic
username

PASSWORD: password

HEL[LO] uic
username

PASSWORD: password

Logs a user on a terminal to access a multiuser system.

HELP[/CLI] [qualifier[s]]

This command form displays on the issuing terminal the contents of SY:
[1,2]HELP.TXT for the Command Line Interpreter specified. (A
maximum of nine qualifiers can be specified.)

HELP %[qualifier[s]]

This form displays text contained in a user-created help file, HELP.HLP, in the current UIC.

The qualifiers depend on which words are included in the system help file or user help file.

INI[TVOLUME]ddnn:volumelabel[/keyword[s]]

Keywords: BAD = [option]
CHA = [characteristics]
DENS = density
EXT = block-count
FPRO = [system,owner,group,world]
INDX = index-file-position
INF = initial-index-file-size
LRU = directory-preaccess-count
MXF = file-count
PRO = [system,owner,group,world]
UIC = [group,member]
WIN = [retrieval-pointer-count]
VI

Produces a Files-11 volume on disk, magnetic tape, or DECtape. On multiuser protection systems, users can only initialize volumes on devices they allocated.

LOGICAL UNIT NUMBERS LUN[S] taskname

Displays at the entering terminal the static logical unit number (LUN) assignments for a specified task.

MOUNT

The Mount command permits file system software to access physical devices. The next two sections describe the procedure for Files-11 disks or DECtape and for ANSI magnetic tape.

MONITOR CONSOLE ROUTINE (MCR) COMMANDS

Files-11 Disk or DECtape Format

MOU[NT] ddn:[volumelabel] [/keyword[s]]

Keywords: ACP = taskname
DENS = density
EXT = block-count
FOR
FPRO = [system,owner,group,world]
LRU = FCB-count
OVR (P)
PARM = "user parameters"
UIC = [uic]
UNL
VI (volume information)
WIN = retrieval-pointer-count

Creates the Volume Control Block (VCB) and declares the volume logically online for access by a file system.

Files-11 (ANSI) Magnetic Tape Format

MOU[NT] ddn:[label]:[/keyword[s]]

Keywords: ACP = taskname
DENS = density
FOR
FPRO = [system,owner,group,world]
OVR (P)
OVRFSID
OVREXP
PARM = "user parameters"
UIC = [uic]
VI

Allocates the Volume Set Control Block (VSCB) and mounted and unmounted volume lists. Devices are specified as devices, and volumes are specified as volumes.

RES[UME]taskname[/keyword]

Keyword: TERM = TTnn: (P)

Allows nonprivileged users to continue execution of a suspended task that was initiated from the entering terminal. Privileged users can direct the Resume command to any suspended task using the Term keyword.


```

RUN taskname[/RSI = magu] [/UIC = [uic]] (P)
RUN taskname dtime [/RSI = magu] [/UIC = [uic]] (P)
RUN taskname sync [dtime] [/RSI = magu] [/UIC = [uic]] (P)
RUN taskname atime[/RSI = magu] [/UIC = [uic]] (P)
RUN [ddnn:] [$]filespec/[keyword[s]] (P)
    
```

Keywords: CKP = option ROPAR = pname
 PAR = pname SLV = option
 PMD = option TASK = taskname
 PRI = number UIC = [g,m]

Initiates execution of a task, either immediately or at one of several time-dependent intervals.

SET /keyword = values

Keywords:	ASR33 = TTnn:	MAXPKT = n (P)
	ASR35 = TTnn:	MCR[= TTnn:]
	BUF = dev:[size]	OVLP[= ccn:]
	COLOG = DEV:filespec	PAR = pname:base:size:type (P)
	COTERM = [TTnn:]	POOL = n (P)
	CRT[= TTnn:]	PRIV[= TTnn:]
	DCL[= TTnn:]	PUB[= dev:]
	EBC[= TTnn:]	QUEUE
	ECHO[= TTnn:]	REMOTE[= TTnn:]
	ESCSEQ[= TTnn:]	RPA[= TTnn:]
	FDX[= TTnn:]	SLAVE[= TTnn:]
	FORMFEED[= TTnn:]	SPEED = TTnn:[recv:xmit]
	HFILL = TTnn:[value]	SYSUIC[= [uic]] (P)
	HHT[= TTnn:]	TERM = TTnn:[value]
	HOLD[= TTnn:]	TYPEAHEAD[= TTnn:]
	KSR33 = [TTnn:]	UIC[= [g,m]:[TTnn:]]
	LA30P = [TTnn:]	VFILL [= TTnn:]
	LA30S[= TTnn:]	VT05B [= TTnn:]
	LA36 = [TTnn:]	VT55 [= TTnn:]
	LA120 = [TTnn:]	VT61 [= TTnn:]
	LA180S = [TTnn:]	VT50 [= TTnn:]
	LIBUIC[= [g,m]] (P)	VT52 [= TTnn:]
	LINES = TTnn:[value]	VT100 [= TTnn:]
	LOGON (P)	WCHK[= dev:]
	LOWER = [TTnn:]	WRAP[= TTnn:]
	MAIN = pname (P)	
	MAXEXT = size (P)	

MONITOR CONSOLE ROUTINE (MCR) COMMANDS

Establishes device characteristics for the device specified. Privileged users can alter device characteristics for all of the devices on the system, but nonprivileged users can only alter characteristics for devices allocated to them. They can, however, observe characteristics for all devices.

SET Console Output Task Commands

SET[/keyword]

Keywords:

COLOG = $\begin{cases} \text{TTnn:} \\ \text{dev:[uic]filename.typ} \\ \text{TTnn:dev:[uic]filename.typ} \end{cases}$
NOCOLOG
COTERM[= TTnn:]
LOGFILE[= dev:[uic]filename.typ]

Controls operation of the Console Log Device and Console Output Task.

Stop STP [taskname] [/keyword]

Keyword: TERM = TTnn: (P)

Declares that the task specified is no longer eligible to execute or compete for memory resources. Nonprivileged users can only stop a task issued from their terminals but privileged users can stop any task.

Task List TAL[taskname]

Displays the names and status of all tasks installed on the system or of the tasks of a particular task name.

TAS[KLIST]

Describes each task installed on the system.

TIM[E] hr:min:sec mo/dy/yr hr:min:sec dy-mo-yr

For privileged users, sets and displays the date and time for the system.
For nonprivileged users, only displays them.

User File Directory UFD ddn:[volumelabel] [g,m] [/keyword(s)]

Keywords: ALLOC = number-of-entries
PRO = [system,owner,group,world]

Creates a User File Directory (UFD) on a Files-11 volume and enters its name onto the Master File Directory (MFD). Privileged users can create UFDs on any volume, but nonprivileged users can create UFDs only on a volume mounted on a device that they have allocated.

UNS[*TOP*] [*taskname*] [*/keyword*]

Keyword: TERM = TTnn: (P)

Continues execution of a previously stopped task.

Privileged MCR Commands

Allocate Checkpoint Spaces ACS ddnn:/BLKS = n

Allocates or discontinues a checkpoint file on disk for systems that support the dynamic allocation of checkpoint space.

ALT[*ER*] *taskname/keyword*

Keywords: PRI = running-and-static-priority
RPRI = running-priority-only
TERM = TTnn:

Changes the static or running priority of an installed task.

BOO[*T*] *filespec*

Bootstraps a system that exists as a task image file on a Files-11 volume.

Breakpoint to XTD BRK

Passes control to the Executive Debugging Tool (XDT).

CLQ[*UEUE*]

Displays on the entering terminal information about tasks currently in the clock queue, or about tasks activated by either a Run command or a RUN\$ directive that specified a time-based option.

Fix-in-Memory FIX *taskname/keyword*

Keywords: REG
RON

Loads and locks a task into its partition. The REG switch allows fixing of a common region. The RON switch allows the fixing of a read-only segment.

MONITOR CONSOLE ROUTINE (MCR) COMMANDS

INS[TALL] [\$]filespec[/keyword[s]]

Keywords: AFF = [CPx,UBy]
CKP = option
EST = option
INC = size
PAR = pname
PMD = option
PRI = number
PRO = [system,owner,group,world]
RON = option
ROPAR = parname
SLV = option
SYNC = option
TASK = taskname
UIC = [g,m]

Makes a specified task known to the system.

LOA[D] dd:[keyword(s)]

Keywords: PAR = parname
CTB = cca[,b...]
SIZE = parsize
HIGH

Reads a nonresident loadable device driver into memory and constructs the linkages required to allow access to the device.

Open Register OPEN[N]mem-addr [+/- n] [/keyword] (mem-addr) (contents-addr)/[value] < line-terminator

Keywords: AFF = [CPx,UBy] KNL
CPU = CPx PAR = partitionname
DRV = dd: REG = regionname
KNL TASK = taskname
KNLD

Allows examination and optional modification of a word of memory. (The keywords only apply to mapped systems.)

REA[SSIGN] taskname lun ddnn:

Reassigns a task's static logical unit numbers from one physical device to another.

MONITOR CONSOLE ROUTINE (MCR) COMMANDS

RED[IRECT] noddn: = oddn:

Redirects all I/O requests from one physical device unit (oddn:) to another (noddn:).

REM[OVE] taskname[/keyword]

Keyword: REG

Deletes an entry (task name) from the System Task Directory (STD) and thereby removes the task from the system.

SAV[E] [/keyword(s)]

Keyword: CSR
WB
MOU =
NOCON
SFILE

Copies the current system image into the system image file from which the current system was booted.

System Service Message SSM message

Inserts text into the error log reports.

Switch Register SWR SWR value SWR bitposition/keywords

Keywords: SET
CLE
DIS

Displays the current value or sets/clears a bit in the switch register. This command only works on multiprocessor systems.

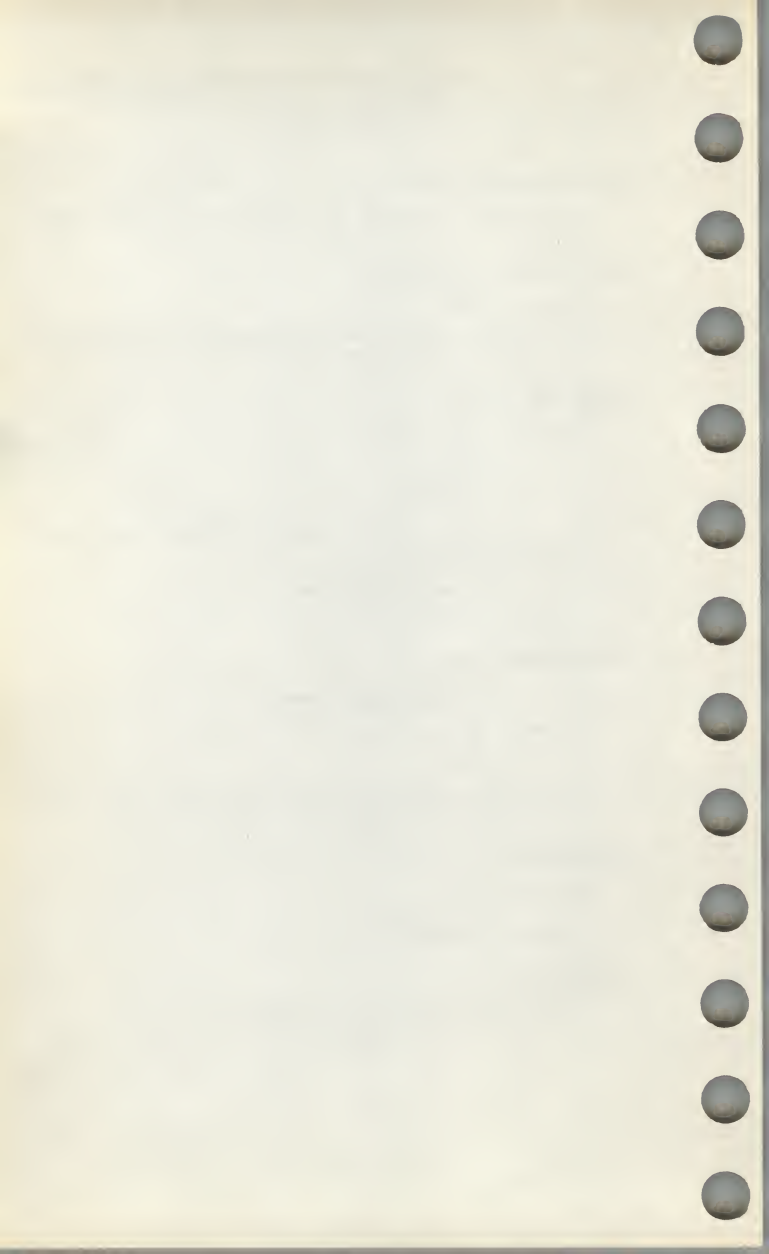
UNF[IX] taskname [/keyword]

Keywords: REG
RON

Frees a fixed task from memory.

UNL[OAD] dd:

Removes a loadable device driver from memory.



LINE TEXT EDITOR (EDI) COMMANDS

In this section, the following conventions are used:

The asterisk (*) can be used in place of any number in an EDI command. It is read as 32,767.

An ellipsis (...) can be used in many search strings to identify characters between the first and last characters of the string.

EDI allows the use of abbreviations in commands. Square brackets enclose optional command text.

A[DD] string

Adds the character string indicated to the end of the current line.

Add and Print AP string

Adds the character string indicated to the end of the current line and prints the entire line on the terminal.

B[EGIN]

Sets the current line to the line preceding the top line in the file or block buffer. This command creates a copy of the file when it is invoked in Line Mode.

BL[OCK] ON OFF

Changes to and from the EDI Block Mode of accessing text.

BO[TTOM]

Moves the line pointer to the bottom of the current block (in Block Mode) or to the bottom of the file (in Line Mode).

Change [n]C[HANGE]/string1/string2[/]

Replaces string 1 with string 2 in the current line n times.

CL[OSE] [filespec]

Transfers the remaining lines in the block buffer and input file to the output file and closes all files.

LINE TEXT EDITOR (EDI) COMMANDS

Close and Delete CDL [filespec]

Transfers the remaining lines in the block buffer and the input files to the output file, closes the output file, and deletes the input file.

Close Secondary CLOSSES

Closes the secondary input file.

Concatenation Character CC [letter]

Changes the concatenation character to the character specified. (The default is &.)

CTRL/Z CTRL/Z

Closes files and terminates the editing session.

D[DELETE] [n] **[·n]**

Deletes the current line and the following n-1 lines if n is a positive number. Deletes n lines preceding the current line if n is a negative number. Negative numbers can only be used in Block Mode.

Delete and Print DP [n] **[·n]**

Deletes the current line and prints the new current line.

E[ND]

Sets the last line in a file or block buffer as the block buffer current line.

ERASE [n]

Erases the current line in Line Mode.

Escape ESC **or** **Altmode** ALT

Prints the previous line and makes it the new current line.

EXIT [filespec]

Transfers the remaining lines in the block buffer and input file to the output file. Closes files, renames the output file if specified, and terminates the editing session.

Exit and Delete ED [filespec]

Transfers the remaining lines in the block buffer and input file to the output file, closes files, renames the output file, and deletes the input file.

FIL[E] filespec

Transfers lines from the input file to both the output file and the specified file until a form feed or end-of-file is encountered. This command can be used only in Line Mode.

Find [n]F[IND] string

Searches the current block or input file, beginning at the line following the current line, for the nth occurrence of the string specified. (If n is not specified, EDI searches for the next occurrence of the string.) This command sets the line pointer to the line it finds. A string must begin in the first column of the line to be a match.

Form Feed (FF)

Inserts a form feed into the block buffer.

IN[sert] [string]

Enters the specified string immediately following the current line. If no string is specified, EDI enters Input Mode.

KILL

Closes the input and output files and deletes the output file.

Line Change [n]LC/string1/string2[/]

Changes all occurrences of string 1 in the current line (and n-1 lines) to string 2.

LINE TEXT EDITOR (EDI) COMMANDS

LI[ST ON TERMINAL]

Prints on the terminal all of the lines remaining in the block buffer or input file.

Locate [n]L[OCATE] string

Locates the nth occurrence of the specified string. In Block Mode, the search stops at the end of the current block.

MACRO [x] definition

Defines the macro number x for the EDI commands in the definition.

Macro Call MC[CALL]:[n]

Retrieves the macro definition stored in the file MCALL:n.

Macro Execute [n]Mx [a]

Executes macro x n times, while passing numeric argument a. The value of x can be 1, 2, or 3.

Macro Immediate [n]<definition

Defines and executes a macro n times. Stores it as macro number 1.

NEXT [n] [-n]

Establishes a new current line n lines away from the current line.

Next and Print NP [n] NP [-n]

Establishes and prints a new current line.

Open Secondary OP[ENS] filespec

Opens the specified secondary file.

OUT[PUT] ON OFF

Enables or disables a file transfer to an output file in Line Mode.

O[VERLAY] [n]

Deletes *n* lines, enters Input Mode, and inserts new lines (*s*), as typed, in place of the deleted lines.

**PAG[E] *n*
 -*n***

Enters Block Mode. Reads page *n* into current block buffer. If *n* is less than the current page, EDI goes to the top of the file first. Pages are set by form-feed characters.

Page Find [n]PF[IND] string

Searches successive blocks for the *n*th occurrence of the string. A string must begin in the first column of the line to be a match.

Page Locate [n]PL[OCATE] string

Searches successive blocks for the *n*th occurrence of the string.

PA[STE] /string1/string2/[/]

Searches all remaining lines in the file or block buffer that contain string 1 and replaces them with string 2.

P[RINT] [n]

Prints the current line and the next *n*-1 lines on the user's terminal. The last line printed becomes the new current line.

REA[D] [n]

Reads the next *n* blocks of text into the block buffer. If the buffer already contains text, the new text is appended to it.

REN[EW] [n]

Writes the current block to an output file and reads a new block from an input file (Block Mode only).

LINE TEXT EDITOR (EDI) COMMANDS

Return **(RET)**

Prints the next line on the terminal and makes it the new current line. This command also exits from Input Mode if it is typed as the first character of a line.

R[ETYPE] string

Replaces the current line with the specified string or deletes the current line if no string is specified.

SA[VE] [n] [filespec]

Saves the current line and the next n-1 lines in the specified file.

Search and Change **SC/string1/string2[/]**

Locates string 1 and replaces it with string 2.

Select Primary **SP**

Reestablishes the primary file as an input file.

Select Secondary **SS**

Selects an open secondary file as an input file.

SIZE n

Specifies the maximum number of lines that can be read into a block buffer.

TA[B] ON **OFF**

Turns automatic tabbing on or off.

T[OP]

Moves the line pointer to the line preceding the top line of the current block in Block Mode or to the top of the file in Line Mode. The TOP command creates a new version of the file each time it is executed in Line Mode.

Top of File **TOF**

Returns to the top of the input file and saves all of the previously edited pages. This command creates a new version of the file each time it is executed in Line Mode.

TY[PE] [n]

Prints the next n lines on the terminal. This command is identical to the PRINT command in Line Mode. However, in Block Mode, the line pointer remains at the current line unless EDI reached the end of a block.

UNS[AVE] [filespec]

Inserts all lines from the specified file following the current line. If no file name is used, EDI looks for a file called SAVE.TMP.

**Upper Case UC ON
 UC OFF**

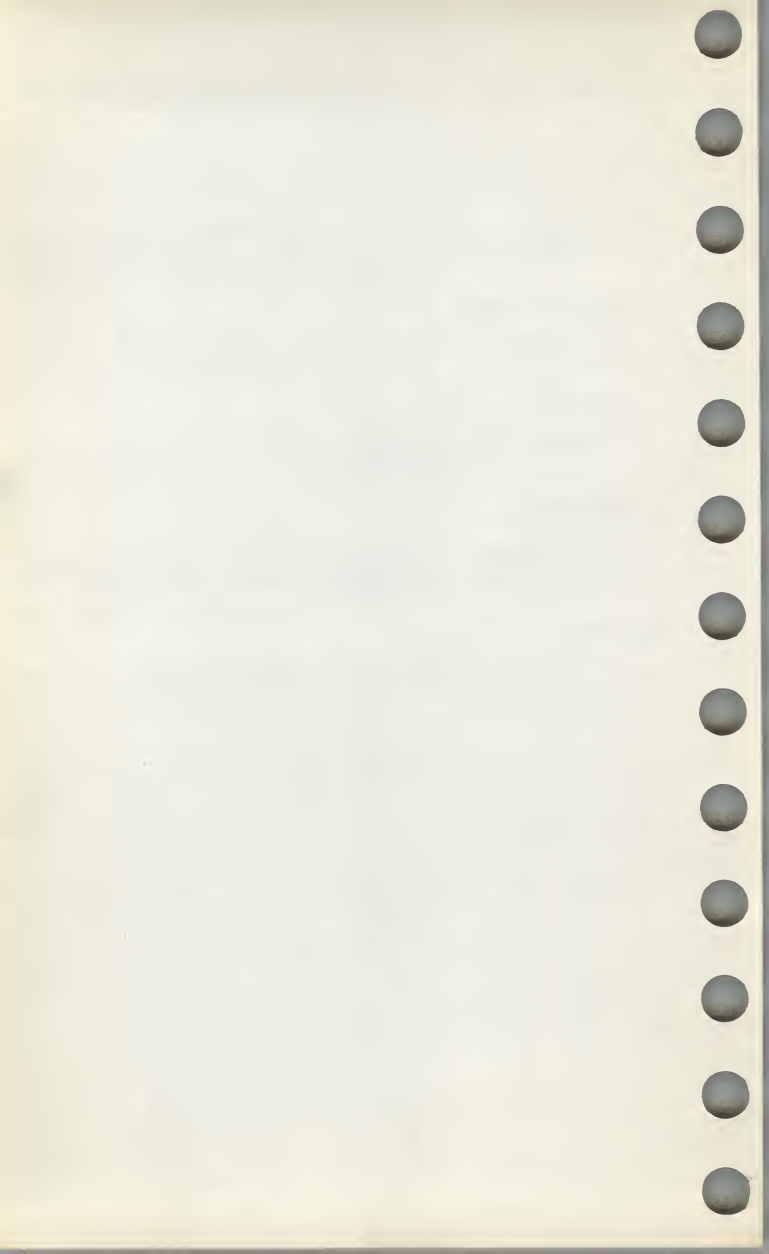
Enables or disables conversion of lowercase letters to uppercase letters when they are entered at a terminal.

**V[ERIFY] ON
 OFF**

Selects whether the operation of the LOCATE and CHANGE commands will be verified (printed on the terminal) after the line is located or changed.

W[RITE]

Writes the contents of the block buffer to an output file and erases the block buffer.



DEC EDITOR (EDT) COMMANDS

C[HANGE] [range] [/NL]

Invokes EDT Character Editing Mode, which can be used only on a video display terminal. (The terminal must also be set to CRT to permit the use of Character Mode.)

Character Mode allows the following subcommands which, except for Exit, work the same as they do in Command Mode:

D[ELETE] [range] [/keyword]

Keywords: CHARACTER
LINE
WORD

Deletes the specified text from a buffer.

E[XIT] [/keyword]

Terminates Character Mode and returns to Command Mode.

I[NSERT] [range] [/keyword]

Inserts text into the buffer.

QUIT

Terminates EDT operation without creating or modifying any files.

R[EPLACE] [range] [/keyword]

Removes specified text and goes into Insert Mode so replacement text can be entered.

S[UBSTITUTE/string1/string2]

Replaces the first string of characters with the second.

CTRL/Z

CTRL/Z

Terminates an insert. Returns to Character or Command Mode.

DEC EDITOR (EDT) COMMANDS

CO[PY] range-1 %TO range-2 [/keyword]

Keywords: QUERY
SEQUence:initnum:incr
UNsequenced

Transfers lines from one location to another, at the same time retaining the lines in their original location.

D[ELETE] [range] [/keyword]

Keyword: QUERY

Deletes the specified lines from the buffer being edited. If no range is specified, deletes the current line.

EX[IT] [/keyword[s]]

Keywords: RE[NAME]:filename
SEQ[UENCE]:initnum:incr
UN[SEQUENCED]

Terminates EDT operation and saves the contents of the main text buffer. Does not save alternate buffers.

FIND range

Moves the line pointer to the beginning of the specified line.

INC[LUDE] [range] /FI:filename [range] [/keyword]

Keyword: SEQ[UENCE]:initnum:incr

Locates a file and copies it into the specified text buffer at the specified range.

I[NSERT] [range] [/keyword(s)]

Keywords: SEQ[UENCE]:initnum:incr
UN[SEQUENCED]

Places the text that is typed at the terminal into a text buffer.

M[OVE] range-1 %TO range-2 [/keyword]

Keywords: Q[UERY]
SEQ[UENCE]:initnum:incr

Transfers lines from one location to another and deletes them from the original location.

PR[INT] [range] /FI:filename

Creates a file from the contents of a text buffer. The new file includes as part of its text the EDT line numbers in the original buffer.

QUIT

Terminates EDT and does not save the contents of any text buffer.

R[EPLACE] [range] [/keyword]

Keywords: SEQ[UENCE]:initnum:incr
UN[SEQUENCED]

Deletes lines specified and enters Insert Mode so that the lines can be replaced.

RES[EQUENCE] [range] [/keyword]

Keywords: SEQ[UENCE]:initnum:incr
UN[SEQUENCED]

Assigns new line numbers to the lines in the current text buffer.

REST[ORE]/FI:filename

Locates the file created by an EDT Save command and uses that file to re-create the status of all files and text buffers as they were preserved with the EDT Save command.

SA[VE]/FI:filename

Preserves the contents of text buffers and the status of all files used during an EDT editing session in a file which the user names (using the form filename.SAV).

DEC EDITOR (EDT) COMMANDS

SET

CA[SE] [/keyword]
{
 UPPER
 LOWER
 NONE
}
EXACT [/keyword]
{
 CASE
 NONE
}
TE[RMINAL] [/keyword]
{
 HCPY
 VT05B
 VT50
 VT52
 VT55
 VT61
 LA30
 LA36
}

Establishes criteria used by other EDT commands to flag upper- or lowercase characters and to set parameters for the terminal being used.

SH[OW] [/keyword[s]]

Keywords: BU[FFERS]
CA[SE]
EXACT
TE[RMINAL]
VE[RSION]

Displays buffer and software version information as well as options established by the Set command.

S[UBSTITUTE]/string1/string2/[range]/[keyword]

Keywords: BR[IEF]
Q[UERY]
-T[YPE]

Changes characters within lines of the text buffer.

S[UBSTITUTE] NEXT

Repeats the substitution carried out in the SUBSTITUTE command it follows.

[TYPE] range

Displays lines of text at the terminal.

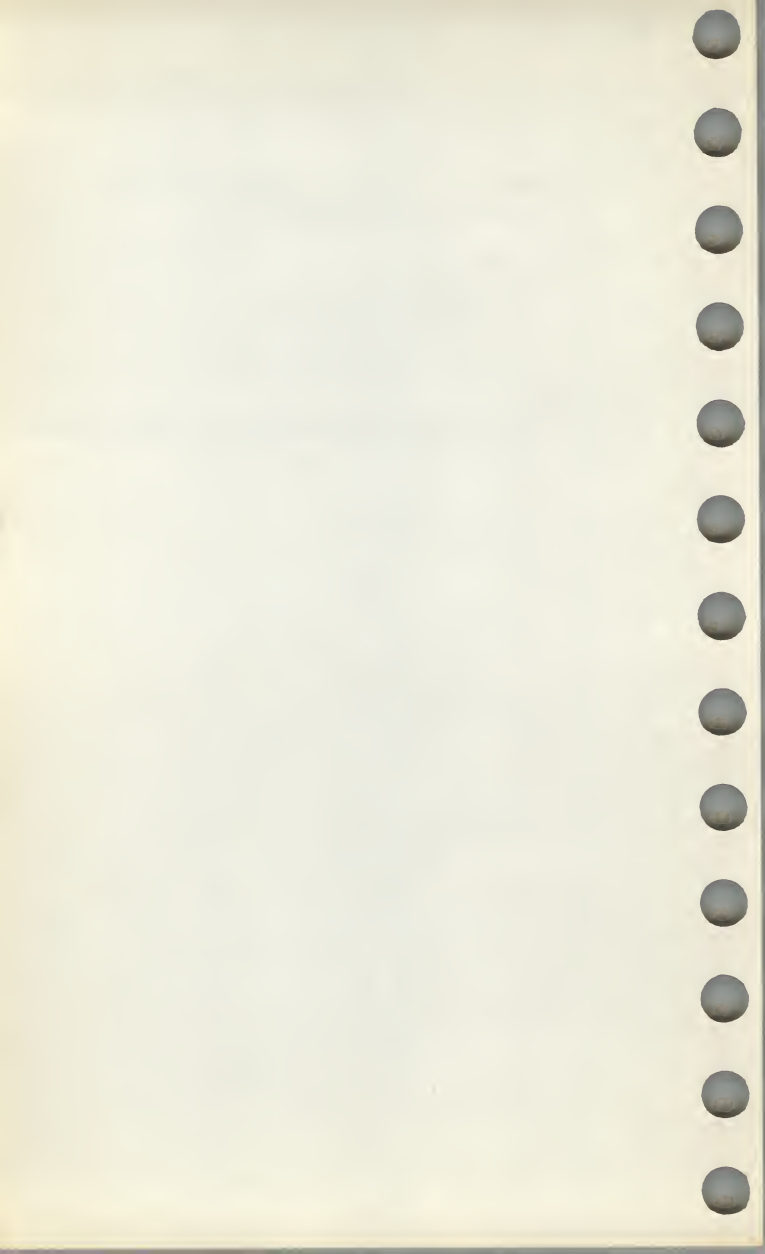
WR[ITE] [range][/keyword]

Keywords: FI:filename
SEQ[UENCE]:initnum:incr
UN[SEQUENCED]

Creates a file from the contents of a text buffer.

XEQ range

Executes a sequence of EDT commands that were previously entered and stored in an EDT buffer.



PERIPHERAL INTERCHANGE PROGRAM (PIP) COMMANDS

COPYING FILES (PIP default operation)

PIP operations are controlled by switches that are used with input or output file specifications in a PIP command.

The default PIP operation (with no switches specified) is to copy files, using the following format:

PIP outfile = infile(s) [/subswitches]

This command creates a copy of the input file(s) on the same or another volume.

PIP allows the following parameters for a copy operation:

outfile If the file name, file type, or file version is null or specified by wildcards, PIP uses the input file parameters unless this is overruled by the New Version (/NV) or Supersede (/SU) subswitch.

If the file name, file type, or file version is defined, no other field can be a wildcard and only one input file can be specified. If more than one input file is specified, the files are merged into the output file.

infile If file name, file type, and file version are null, the default is *.*.*.

Possible subswitches for the copy operation are:

/BL:n Specifies the number of contiguous blocks for the output file, where n is octal or decimal.

If n is decimal, it is followed by a period (n.).

/CO, /-CO, or /NOCO Specifies a contiguous or noncontiguous output file.

/FO Specifies the file ownership (output file UFD).

/NV Forces the output version number of the copied file to be 1 higher than the current version.

/SU Copies the output file, superseding the existing output file.

PERIPHERAL INTERCHANGE PROGRAM

(PIP) COMMANDS

The following sections describe other PIP operations, which are also controlled by switches in a PIP command line. The descriptions begin with the name of the PIP operation and an example of the command format.

Append outfile[/FO] = infile(s)/AP[/FO]

Opens an existing file and appends the input file to the end of it.

PIP allows the following parameters for this command:

outfile Explicit file name and file type.

infile(s) Explicit file parameters or wildcards by default.

/FO File ownership is the output file UFD; without the FO subswitch, ownership is the UIC of the user running PIP.

Block size outfile[/BS:n] = infile[/BS:n]

Defines the block size for 7- to 9-track magnetic tape.

Creation Date outfile/CD = infile

Gives the output file the creation date of the input file rather than the date of the file transfer. (This switch cannot be used in a Merge operation.)

Default [ddn:] [g,m]/DF

Changes the PIP default device and/or UFD. Either the device, UFD, or both must be specified.

Delete infile(s)/DE[/LD]

Deletes files. The subswitch /LD causes PIP to list the files it deletes. If you use /LD, you do not have to specify /DE; subswitches imply the switch.

End-of-file infile/EOF[:block:byte]

Specifies the end-of-file pointers for a file. If values for block and byte are not entered, PIP places EOF at the last byte of the last block in the file.

Enter outfile = infile(s)/EN[/NV]

Enters a synonym for a file in a directory with an option to force the version number of the output file to 1 greater than the latest version for the file.

PERIPHERAL INTERCHANGE PROGRAM
(PIP) COMMANDS

outfile The file name, file type, or file version can be explicit, a wildcard, or null. A field that is a wildcard or null assumes a corresponding input field.

infile Default for the file name, file type, and file version is *.*.*.

/NV The New Version switch forces the output version number of the copied file to be 1 higher than the current version.

File ID **outfile = /F:filename:sequencenumber**

Accesses a file by its file identification number (File ID).

Free **[ddn:]FR**

Prints on the terminal the amount of space available on a volume and the largest block of contiguous space.

Identification **/ID**

Causes the version number of PIP currently in use to be displayed on the terminal.

List **listfile = infile[s]/LI[/subswitch]**

Lists the contents of one or more User File Directories, with an option to specify formats for output directories.

listfile Listing file specifier; defaults to TI:.

infile Default is *.*.*.

The subswitches determine what type of report is displayed.

/LI/BR Brief report.
or **/BR**

/LI Limited report.

/LI/FU[:n] Full report (n specifies the decimal characters per line; the default is device buffer size).
or **/FU[:n]**

/LI/TB or Total blocks report.
/TB

PERIPHERAL INTERCHANGE PROGRAM

(PIP) COMMANDS

Merge (Concatenate) outfile = infile/ME[/subswitches]

Creates one file by concatenating two or more files. The fields and subswitches are the same as for the PIP Copy operation:

/BL:n Specifies the number of contiguous blocks for the output file, where n is octal or decimal.

If n is decimal, it is followed by a period (n.).

/CO, /-CO, or /NOCO Specifies a contiguous or noncontiguous output file.

/FO Specifies the file ownership (output file UFD).

/NV Forces the output version number of the copied file to be 1 higher than the current version.

/SU Copies the output file, superseding the existing output file.

New Version outfile = infile(s)/NV

Creates an output file with a version number 1 higher than the current version.

No Message infile(s)/NM[/switches]

Causes certain PIP error messages not to be printed, for example, the message NO SUCH FILE(S). The switches that can be used with the No Message switch are;

/LI Lists directory. **/PU** Purges files.

/DE Deletes file(s). **/UN** Unlocks files.

Any subswitches of these switches can also be used.

Protection, Symbolic infile/PR:symbolic

Alters the file protection for the file specified. The file name and file type must be explicit.

Symbolic protection codes assign privilege merely by their presence, using:

System = /SY:RWED

Owner = /OW:RWED

Group = /GR:RWED

World = /WO:RWED

PERIPHERAL INTERCHANGE PROGRAM
(PIP) COMMANDS

Protection, Numeric infile/PR:numeric:infile/PR:octalvalue[/FO]

Numeric protection denies privilege by setting bits in a protection status word. Add octal values from the following list to deny privilege.

NUMERIC PROTECTION

User Class	Privilege	Octal Code	Bit
System	R	1	0
	W	2	1
	E	4	2
	D	10	3
Owner	R	20	4
	W	40	5
	E	100	6
	D	200	7
Group	R	400	8
	W	1000	9
	E	2000	10
	D	4000	11
World	R	10000	12
	W	20000	13
	E	40000	14
	D	100000	15

Purge infile(s)/PU[:n]

Deletes a specified range of versions of a file (but does not delete the latest version). Specification of a file version number is not necessary. Wildcards are valid for file name and file type.

When :n is specified, PIP deletes all but the n latest consecutively numbered versions. Without :n, PIP deletes all but the latest version.

Remove infile(s)/RM

Removes an entry from a user file directory (the opposite of ENTER).

PERIPHERAL INTERCHANGE PROGRAM (PIP) COMMANDS

Rename outfile = infile(s)/RE[/NV]

Changes the name of the file specified as infile. Used with the New Version (/NV) switch, RENAME creates an output file with a version number 1 higher than the last version of the file.

outfile A wildcard (*) or null field assumes the value of the corresponding field in the input file.

infile Null file name, file type, and file version default to *.*.*.

/NV The New Version subswitch forces the output version number of the copied file to be 1 higher than the current version.

Rewind outfile[/RW] = infile[/RW]

outfile Causes the tape on the specified unit to be erased.

infile Causes the tape on the specified unit to be rewound before the input file is opened.

Selective Delete infile(s)/SD

Prompts for user response before deleting files.

Shared Reading infile(s)/SR

Allows shared reading of a file that has already been opened for writing.

Span Blocks outdiskvolume:outfile/SB = inmagvolume:infile

Allows output file records to cross block boundaries when ANSI tapes are being copied to Files-11 volumes.

Spool infile(s)/SP[:n]

Specifies a list of files to be printed (n is the number of copies). This switch is used only with the Serial Despooler or the Queue Manager. However, its use with the Queue Manager is not recommended.

Supersede outfile = infile(s)/SU

Copies an input file, creating an output file that supersedes an existing file of the same name, type, and version number.

PERIPHERAL INTERCHANGE PROGRAM
(PIP) COMMANDS

User File Directory outfile(s)/UF[/FO] = infile(s)

Creates a User File Directory on a volume.

outfile Specifies the UIC as [*,*] to transfer multiple infile UICs.

/FO Specifies the file ownership.

UNLOCK infile(s)/UN

Unlocks a file that was locked as a result of being closed improperly. Lets the user know that the data contained in the file may have been corrupted.

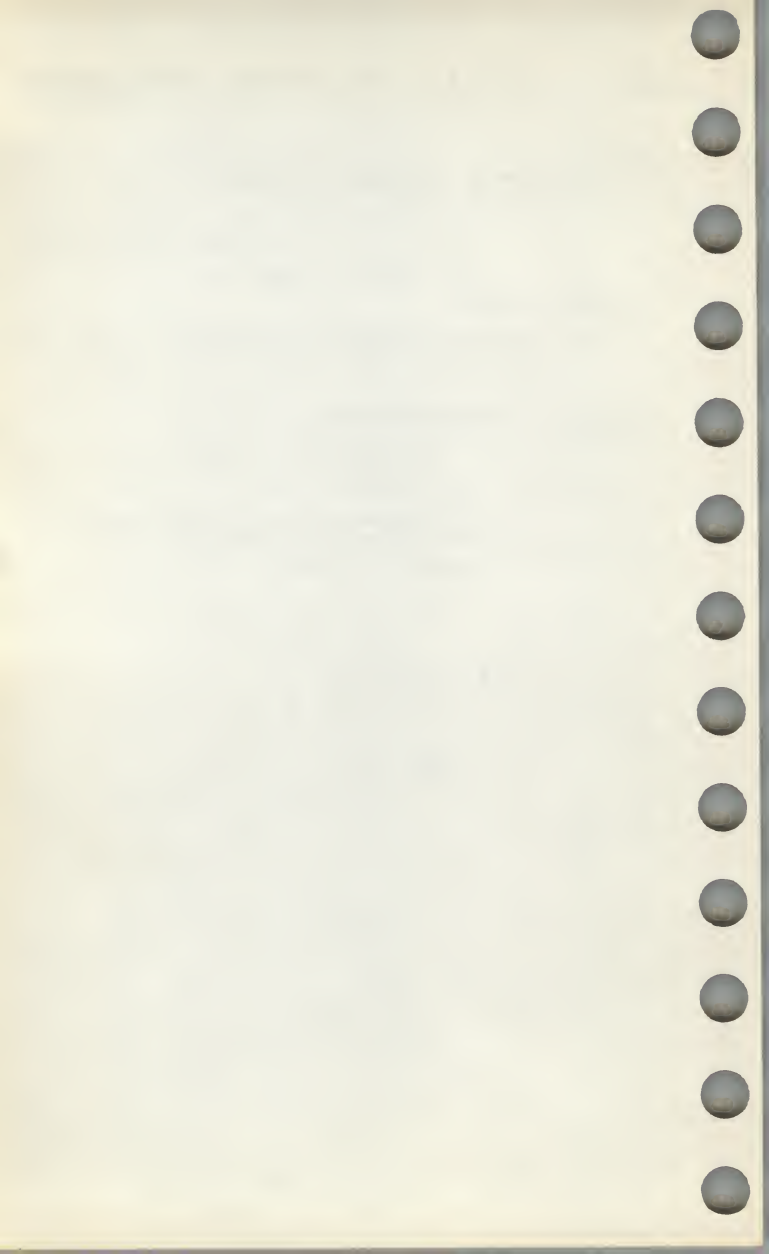
Update File outfile = infile(s)/UP[/FO]

Opens an existing file and writes it into the output file.

outfile Must be explicitly identified.

infile Null parameters default to *.*.*. Input file(s) replace the current contents of output files.

/FO Specifies the file ownership.



ON-LINE DEBUGGING TOOL (ODT) COMMANDS

OPEN/DISPLAY/MODIFY TASK LOCATIONS

address mode-symbol contents new-value terminator

address (a)

Specifies the effective address of the location (word or byte) to be opened. The address can be expressed absolutely or in relative form (see Relocatable Address). An odd address forces byte mode.

mode-symbol

Specifies the mode in which the location is to be opened or displayed. If the address is not specified, the last opened location is opened and displayed.

Symbol	Open/Display Location As:
/	6-digit octal word
\	3-digit octal byte
"	2 ASCII characters (word)
'	1 ASCII character (byte)
%	3 Radix-50 characters (word)

contents

Specifies the current contents of the opened location.

new-value [k]

Specifies the optional value to replace the current contents upon termination of the command line.

terminator

Closes the currently open location, replacing the current contents (if so directed). The terminators are:

Return (RET)

Terminates the current sequence, displays the ODT prompt (_), and waits for the next command.

Line feed (LF)

Opens the next sequential location and prints its contents.

ON-LINE DEBUGGING TOOL (ODT) COMMANDS

Circumflex (^) or up-arrow (↑)

Opens the preceding location in the current mode. If typed as an ODT prompt, rather than as a terminator, opens the location that precedes the last-opened location in the same mode.

Underline (_) or back-arrow (←)

Opens the PC-relative location. The effective address equals the contents (previous or replaced) of the current location added to its address plus 2. Mode is the same, except that odd effective addresses force byte mode.

At sign (@)

Opens the location addressed absolutely by the contents (previous or replaced) of the current location. Mode is the same, except that odd effective addresses force byte mode.

Right angle bracket (>)

Opens the PC-relative branch-offset location. The effective-address calculation involves the low-order byte of the contents (previous or replaced) of the just-closed location. Byte, as a signed value, is multiplied by 2 and added to its effective address plus 2. Mode remains the same as when the location was opened.

Left angle bracket (<)

Reopens the location most recently opened by a /, (LF) , or ^ . If the currently open location was not opened by a _ , @ , or > , then < closes and reopens the current location.

COMMAND INPUT ERRORS

Individual characters in a command line cannot be corrected. In general, typing an illegal character or command (such as 8 or 9) causes ODT to ignore the input, print the question mark error indicator (?), and wait for a valid command.

RELOCATABLE ADDRESS

An effective address can be entered as an explicit value to be added to the contents of a relocation register. Typically, the register contains the relocatable base address for the applicable program section or object module. ODT displays task addresses in relative form if a relocation register contains an address-offset value equal to or less than the address to be displayed, and if the Format Register (\$F) contains 0. ODT also displays the register's initialized state. Otherwise, ODT displays addresses in absolute form. The relocation registers are identified as 0R through 7R; a null value is taken as 0 when an offset is established. The registers initially contain -1, the nonactive state.

Establishing Relocatable Address Offsets

- value;nR Value replaces current contents of relocation register n.
- n,value;nR Value is added to (subtracted from) current contents of relocation register n.
- \$nR/ Displays current contents of relocation register n. New value is typed before terminator replaces current contents.

Inhibiting Relocatable Addressing

- R Sets all active relocation registers to -1, the nonactive state.
- nR Sets relocation register n to -1, the nonactive state.

Entering or Displaying Relative Address

- r,address Effective address is address relative to (plus) the current contents of relocation register r.

BREAKPOINTS

A breakpoint must be set in the first word of an instruction. Breakpoints are identified as 0B through 7B. (8B is reserved for use with single step execution.) A breakpoint address can be entered in absolute or in relative form (see Relocatable Address).

Inserting Breakpoints

- r,address;nB Inserts breakpoint n at specified address.
- r,address;B Inserts next unset breakpoint at specified address.

Removing Breakpoints

- B Removes all inserted breakpoints.
- nB Removes only breakpoint n.

Moving Breakpoints

- r,address;nB Moves breakpoint n to new address, overriding previous address.

Report of Breakpoint Occurrence

- nB:r,address Reports address at which breakpoint n suspended task execution.

ON-LINE DEBUGGING TOOL (ODT) COMMANDS

Displaying Breakpoint Position

\$nB Displays current absolute address (or inactive state) of breakpoint n. Entering a replacement value alters the current contents of the breakpoint register.

CONTROL OF TASK EXECUTION

Go Command

G Initiates task at entry address.

r,address G Initiates task at specified address (address must be even). Execution continues to a breakpoint or to completion.

Proceed Command

P Resumes task execution from current breakpoint suspension, and continues to a breakpoint or completion.

nP Resumes task execution from current breakpoint suspension, and does not recognize this breakpoint again until its nth occurrence.

\$nC Displays current contents of the proceed-count register associated with breakpoint n. New value typed before terminator replaces current contents.

Single-Instruction Command

S Executes PC-addressed instruction, suspends task, and prints address of next instruction.

nS Executes next n instructions, suspends task, and prints address of next instruction.

8B:r,address Specifies the next instruction's address.

FILL MEMORY BLOCK - F COMMAND

The memory-limit registers, low (\$L) and high (\$H), must contain the address boundaries of the affected memory area. Both contain 0 initially.

The following sequence establishes the address reference, which can be in relative or absolute form:

\$L (or \$H)/contents new-address terminator

value F Places a value in search argument register (\$A) and/or enters the current contents of (\$A) in all memory locations from low limit (\$L) through high limit (\$H) in the same mode as the last-opened location.

LIST MEMORY BLOCK - L COMMAND

L Prints memory locations within specified address limits on console listing device (CL:).

kL Uses address value k as ending location and initiates listing operation.

a;L Uses address value a as a beginning location and initiates listing operation.

a;kL Uses address values a and k as beginning and ending addresses and initiates listing operation.

n;a;kL All listing control arguments are specified in a single listing command; n is the LUN register containing the address of the listing device.

CALCULATING OFFSETS - O COMMAND

Calculates positive or negative (2's complement) PC-relative and branch offsets between even (word) addresses.

From Open Location

address/contents/addressO pc-rel >branch

Example: 16126/001402/16134O 000004 >000002

Between Two Specified Addresses

address;addressO pc-rel >branch

Example: 16126;16134O 000004 >000002

ON-LINE DEBUGGING TOOL (ODT) COMMANDS

GENERAL PURPOSE REGISTERS

C Constant Register

Contains user-specified 16-bit value (unsigned, absolute) for reference as "C" in any address or new-value expressions. \$C/ prints current contents. New value typed before **(RET)** replaces contents.

Q Quantity Register

Always contains the last value printed for reference as "Q" in address or new value expressions.

PROCESSOR STATUS WORD

\$S/

Displays the task Processor Status Word (PSW). The new value typed before the terminator replaces the old PSW contents.

DIRECTIVE STATUS WORD

\$W/

Displays a task's directive status word (\$DSW). The new value typed before the terminator replaces the old contents.

MISCELLANEOUS SYMBOLS AND OPERATORS

- + or space Sums contiguous arguments.
- Subtracts the following argument from the preceding one.
- . Equals address of the last explicitly opened location.
- = Calculates the 16-bit value (positive or 2's complement) of the preceding argument string, prints it as 6 octal digits, and stores it in Q. Arguments can be signed or unsigned octal values, or relocatable address expressions, or any valid ODT expression.

TERMINATING ODT SESSION

- X Terminates ODT and returns control to the system monitor.

For additional information, refer to the *IAS/RSX-11 ODT Reference Manual*.

TASK BUILDER (TKB) SWITCHES AND OPTIONS

In this section, red type indicates user input.

The format for Task Builder commands is:

```
>TKB
TKB > taskimagefile, memallocfile, symdeffile = inputfile(s)
```

For example, to task build a program called Zebra, type:

```
>TKB
TKB > ZEBRA.TSK, ZEBRA.MAP, ZEBRA.STB = ZEBRA.OBJ. . .
TKB > /
ENTER OPTIONS:
TKB > optionname = argument(s)
. . .
TKB > // (to end Task Builder operation)
or
TKB > / (if you have another task to build)
```

The Task Builder file specification is:

```
filespec = dev:[g,m]filename.typ; version/switch(es)
defaults = SY: [uic]filename.typ;n/switch
```

The Task Builder uses the following default file types for the files named:

Task Image File	.TSK
Memory Allocation File	.MAP
Symbol Definition File	.STB
Object Module	.OBJ
Overlay Description	.ODL
Indirect Command	.CMD
Object Module Library	.OLB

In the file specification above, n is the latest version number for an input file and the latest version plus 1 for an output file.

TASK BUILDER (TKB) SWITCHES AND OPTIONS

Switches

The following key is used in the description below to designate which input and output files can use the Task Builder switch specified.

[T]	Task Image	(.TSK)
[M]	Task Builder Map	(.MAP)
[S]	Symbol Definition	(.STB)
[I]	Input	(.OBJ, .OLB, .ODL, .CMD)

The default value for switches is negative (-sw) unless otherwise specified.

/AC:n

Specifies that the task is an Ancillary Control Processor (ACP); n specifies the base relocation register (allowable registers are 0, 4, or 5; default register is 5). Overrides /PR if applied to the same file. [T]

/AL

Makes the task image file checkpointable and allocates checkpoint space in the checkpoint file. (Do not use with /CP in the same command line.) [T]

/CC

Specifies that the input file contains more than one object module. /CC task builds only the first object module. The LB (library) switch overrides /CC if it is applied to the same file. (Default is /CC.) [T]

/CM

Specifies a compatibility mode resident overlay structure. (Overlay segments are aligned on 256-word physical boundaries.) [T]

/CP

Makes the task image checkpointable and allows the task to be checkpointed to system checkpoint space. (Do not use in the same command line with /AL.) [T]

/CR

Appends a global cross-reference listing to the memory-allocation file. [M]

/DA

Includes a debugging aid in the task image (ODT) for a task-image (output) file or a user-supplied debugging program (for an input file). [T, I]

TASK BUILDER (TKB) SWITCHES AND OPTIONS

/DL

Specifies a default library file for global references that remain undefined after user-specified library files have been searched. (Can be applied to only one input file per task.) [I]

/EA

Specifies that the task uses the extended arithmetic element. (/FP overrides /EA if applied to the same file.) [T]

/FP

Specifies that the task uses the floating-point processor. (Overrides /EA if applied to the same file.) [T]

/FU

Specifies a full search of all co-tree segments for a matching definition or reference when processing modules from the default object module library. [T]

/HD

Includes a header in the task image. (Default is /HD; /-HD is used with common blocks, resident libraries, loadable drivers, and system images.) [T,S]

/LB

Without arguments: TKB uses the input file as a library of relocatable object modules and searches to resolve undefined global references. Includes in task image any modules found in the library that resolve the undefined references. [I]

With arguments: [/LB:mod-1:mod-2] TKB inserts only the modules named in the command into the task image. [I]

/MA

Includes information from the input file in the memory allocation listing (when applied to an input file) or controls the display of information about the default library and shared regions (when applied to a memory allocation file). (Default is /MA for input file or /-MA for a memory allocation file.) [M, I]

TASK BUILDER (TKB) SWITCHES AND OPTIONS

/MM

Specifies that the system has memory management hardware. (Defaults to /MM if host system has memory management, or to /-MM if it does not.) [T]

/MP

Specifies that the input file describes the task's overlay (tree) structure. [I]

/MU

Specifies that more than one user can share the read-only portions of a task.

/PI

Specifies that only position-independent code or data is in the shareable global area. [T, S]

/PM

Produces a Postmortem Dump if the task is terminated with an SST abort. [T]

/PR:n

Specifies that the task has privileged access. /AC overrides /PR:n if applied to the same file; n specifies base relocation register (0, 4, or 5: default is 5). [T]

/RO

Enables recognition of the memory-resident overlay operator (!) in the overlay descriptor file (/MP). (Default is /RO.) [T]

/SE

Specifies that the task can receive messages by means of the Executive SEND directive. (Default is /SE.) [T]

/SH

Produces a short form of the memory-allocation file without the file contents section. [M]

TASK BUILDER (TKB) SWITCHES AND OPTIONS

/SL

Specifies that the task is slaved to an initiating task. Slave task runs under the UIC and TI: of the sending task. (Applies only to systems with multiuser protection.) [T]

/SP

Lists the memory-allocation file on the printer via the spooler. (Default is /SP.) [M]

/SQ

Builds program sections in the task image in the order in which they are named, rather than in alphabetical order. (Cannot be used with FORTRAN I/O handling modules or FCS modules from SYSLIB.) [T]

/SS

Extracts a global symbol definition from the input file if the global symbol table has a matching undefined reference. [I]

/TR

Specifies that the task can be traced. [T]

/WI

Lists the memory-allocation file in 132-column (wide) format. (Default is /WI.) [M]

/XT:n

Terminates the building of the task after n error diagnostics are detected; n can be octal or decimal (decimal must be specified with a decimal point, for example, 8.).

Options

[H]

Option is of interest to high-level language programmers.

[M]

Option is of interest to MACRO-11 programmers.

[H,M]

Option is of interest to both high-level language and MACRO programmers.

Names used for option input can be 6 characters long, from the Radix-50 character set (A-Z, 0-9, and \$).

TASK BUILDER (TKB) SWITCHES AND OPTIONS

ABORT = n

Terminates the current task-build operation and restarts the Task Builder for another. (The n satisfies the option syntax; it means nothing.)
[H, M]

ABSPAT = segname:address:value1...:value8

Patches the task image from its absolute address through 8 words. [M]

ACTFIL = filemax (decimal integer)

Specifies the number of files that a task can have open simultaneously (the default is 4). [H]

ASG = devicename:un1...:un8

Assigns logical unit number(s) in decimal to specified physical device(s).
[H, M]

COMMON = name:access-code[:apr]

Declares that the task will access a system-owned resident common area.
[H,M]

CMPRT = name

Identifies the completion routine in a supervisor-mode library. [M]

EXTSCT = psectname:extension

If the program section has the concatenated attribute, this option extends the size of the named program section by the number of octal bytes specified in the extension. If the program section has the overlay attribute, it is extended only if the extension value exceeds the length of the section. [H, M]

EXTTSK = n

Extends the task memory allocation by the length n (in decimal words) when it is installed in a system-controlled partition. The extension is rounded to the closest 32-word boundary. The default is the extension to the total task size as specified by the PAR option length parameter.
[H, M]

TASK BUILDER (TKB) SWITCHES AND OPTIONS

FMTBUF = max-format (decimal integer)

Specifies the number of characters (in decimal bytes) in the longest format specification to be compiled at run time. The default is 132. [M]

GBLDEF = symbol-name:symbol-value

Defines the named global symbol as having a value in the range of 0 through 177777 (octal). [M]

GBLPAT = segname:symname[+/-offset]:val1....val8

Patches the task image from the location addressed by the global symbol plus or minus the octal offset value through 8 words. All values are octal. [M]

GBLREF = symbol-name:symbol-value

Declares the named symbol as a global symbol reference originating in the root segment of the task. [H, M]

GBLXCL = symbolname:symbolname:....:symbolname

Specifies the symbols that are to be excluded from the symbol definition file of a resident supervisor-mode library. [H, M]

LIBR = name:access-code[:apr]

Declares that the task will access a system-owned resident library. [H, M]

MAXBUF = max-record

Specifies the maximum allowable record buffer size (in decimal bytes) in any file processed by the task. [H]

ODTV = symbol-name:vector-length

Declares the named global symbol to be the address of the ODT synchronous system trap vector (SST). The global symbol must be defined in the main root segment. [M]

PAR = name[:base:length]

Identifies the partition for which the task is built. For a mapped system, a size of 0 implies a system-controlled partition, and a nonzero size implies a user-controlled partition. Base and length do not have to be expressed if the partition resides on the host system. The default is PAR=GEN. [H, M]

TASK BUILDER (TKB) SWITCHES AND OPTIONS

PRI = priority

Sets the priority at which the task executes; can be overridden when the task is installed. The priority is a decimal integer between 1 and 250. [H, M]

RESCOM = filespec/access-code[:apr]

Declares that the task will access a user-owned resident common. [H, M]

RESLIB = filespec/access-code[:apr]

Declares that the task will access a user-owned resident library. [H, M]

RESSUP = filespec/[.]SV[:apr]

Specifies that the task will access a resident supervisor-mode library. [H, M]

ROPAR = parname

Specifies the partition in which the read-only portion of a multiuser task resides. [H, M]

STACK = stack-size

Establishes the maximum size of the stack available to the task. The default is 256 bytes. [H, M]

SUPLIB = name:[.]SV[:apr]

Specifies that the task will access a system-owned resident supervisor-mode library. [H, M]

TASK = taskname

Names the task. [H, M]

TSKV = symbol-name:vector-length

Declares a global symbol to be the address of the task synchronous system trap vector (SST). [M]

UIC = [g,m]

Declares the UIC for time-based initiation of a task. The default is the UIC under which the Task Builder is running. [H, M]

UNITS = max-units

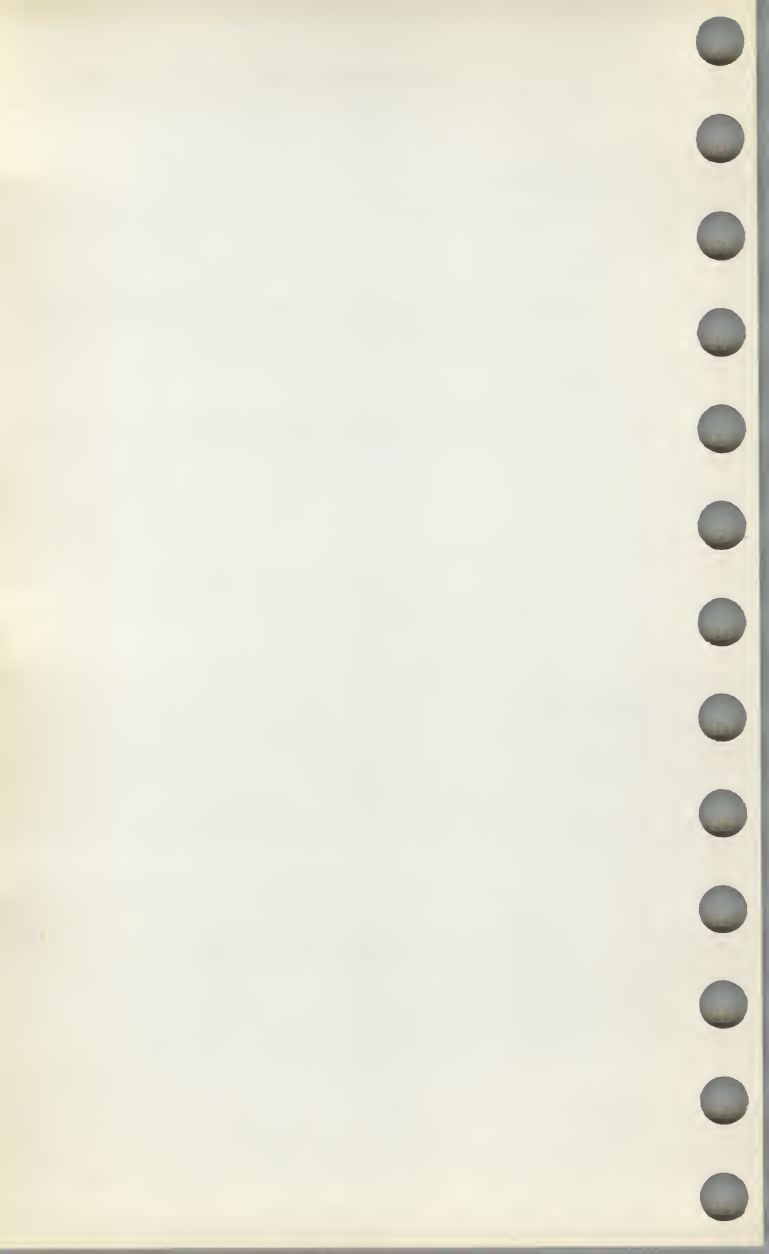
Declares the number of logical units used by the task (a decimal number in the range of 0 through 250). The default is 6. [H, M]

VSECT = psectname:base:window[:physical-length]

Specifies the virtual base address, length of virtual memory address space (window), and length of physical memory allocated to the named program section. [H, M]

WNDWS = n

Declares the number (0 through 7) of extra address windows required by the task. The number specified equals the number of simultaneously mapped regions the task will use. [H, M]



ERROR LOGGING OPERATIONS

The error logging subsystem formats and generates reports on hardware reliability and the system configuration for an RSX-11M-PLUS system. Error logging must be generated into the system before the user can invoke any of the error logging tasks (ERRLOG, PSE, SYE, or ERF). After error logging is activated, its operation is transparent to the system user until the reports it generates are needed.

In this section, red type indicates user input.

To activate error logging, enter the following commands from a privileged terminal:

```
> INS $ERL
> RUN ERRLOG
```

To install and run the preformatter task (PSE), enter the following command from a privileged terminal:

```
> INS $PSE
```

Then enter the following commands from any terminal:

```
> PSE
PSE > RET
```

The defaults are:

```
SY:[1,6]ERROR.SYS = SY:[1,6]ERROR.TMP;*
```

or

```
PSE > outdev:[UFD]filename.filetype = Inputfile
      (assumes input file is [1,6] ERROR.TMP;*)
PSE > CTRL/Z
```

Note that PSE cannot be run with the RUN \$PSE command format.

To install and run SYE, type the following command from any terminal:

```
> RUN $SYE
SYE > outdev:[UFD]filnam.type = Indev:[UFD]filnam.type/options
```

The defaults are:

```
SY:[user UIQ] ERRLOG.LST = SY:[1,6] ERROR.SYS/-RP
```



ERROR LOGGING OPERATIONS

Report options allow the user to select additional error reports to supplement the summary reports (SYE always produces summary error reports) and to specify a time frame for the report.

Report Option Switch

Description

/RP[:class]

Requests individual error reports; the class parameter is used to specify a general classification of errors to be reported. If no class parameter is specified with the RP switch, SYE reports on all classes.

Class has one of the following values:

null

All classes.

SYS[:type]

All system entries (including error logging start up and PSE entries), which are significant to DIGITAL service groups, such as Field Service or Software Support.

Type is one of the following:

CFG	Configuration information
NULL	All types of system entries
PSE	Entries from PSE operation
STA	Error logging start up
MOU	Device mounts and dismounts
TIM	System time changes
MSG	System Service Message
PWR	Power Fail

HDW[:type]

All hardware errors. When class is HDW, an additional parameter can be specified, further defining the errors to be reported. This parameter takes the form:

/RP:HDW[:type]

Type is one of the following:

NULL	All types of hardware errors
DSK	All disk errors
MAG	All magnetic tape and DECtape errors
MEM	All cache and main memory parity errors

Report Option Switch	Description
	<p>TMO[:type]</p> <p>Interrupt timeout errors from disks and tapes.</p> <p>Type is one of the following:</p> <p>DSK Disk information only</p> <p>MAG Magnetic tape information only</p> <p>CR:n Reprints information on configuration tables</p>
/SU	Creates summary report
/QU	Creates short (quick) summary report
/-RP or /NORP	Does not include individual error reports. SYE produces a summary report only. /-RP is the default.
/DV:dev[n]	<p>Includes in the report only those errors that occurred on a specified device type or on a specified device unit.</p> <p>In addition to the standard device types, the following types can be used:</p> <p>CMM Communication devices</p> <p>UDI Undefined interrupts</p>
/BEG:time-and-date	<p>Includes in the report only errors logged after the specified time and date. The format of the time-and-date parameter is:</p> <p>dd-mon-yr:hr:mi:se</p> <p>All the numbers are decimal and leading zeros are not required. Null equals zero. The field terminator (:) must be entered for a null field. The hours (hr) field is based on a 24-hour clock.</p>
/END:time-and-date	<p>Includes in the report only errors logged prior to the specified time and date. The format of the time and date parameter is:</p> <p>dd-mon-yr:hr:mi:se</p> <p>All the numbers are decimal and leading zeros are not required. Null equals zero. The field terminator (:) must be entered for a null field. The hours (hr) field is based on a 24-hour clock.</p>

ERROR LOGGING OPERATIONS

Report Option Switch	Description
-------------------------	-------------

/HELP	Causes SYE to display SYE operating instructions. To obtain this information, the user specifies the /HELP in response to the SYE prompt as follows: SYE >/HELP (RET)
/SP	Spools the output file. This is the default SYE operation.

To terminate Error Logging, run the Error Log Finish (ERF) task by entering the following command from a privileged terminal:

>INS \$ERF (RET)

>ERF (RET)

For additional information, refer to the *RSX-11M/M-PLUS Error Logging Reference Manual*.

I/O ERROR CODES

The table below lists RSX-11M-PLUS I/O error codes. Partial abbreviations are listed; the complete abbreviation is IE.xxx. The octal number listed is the low-order byte of the complete word value (2's complement of the decimal number).

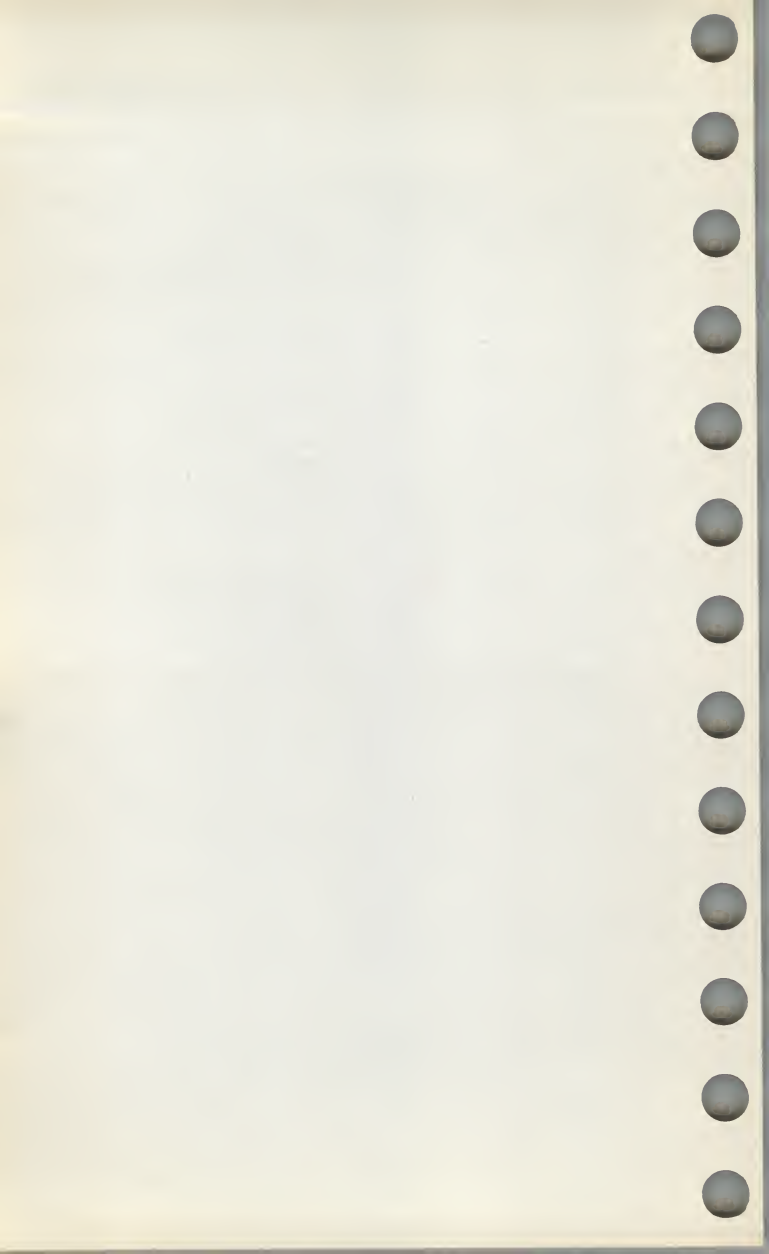
Abbreviation	Error Number		Meaning
	Decimal	Octal	
.BAD	- 1	377	Bad parameters
.IFC	- 2	376	Invalid function code
.DNR	- 3	375	Device not ready
.VER	- 4	374	Parity error on device
.ONP	- 5	373	Hardware option not present
.SPC	- 6	372	Illegal user buffer
.DNA	- 7	371	Device not attached
.DAA	- 8	370	Device already attached
.DUN	- 9	367	Device not attachable
.EOF	-10	366	End-of-file detected
.EOV	-11	365	End-of-volume detected
.WLK	-12	364	Write attempted to locked unit
.DAO	-13	363	Data overrun
.SRE	-14	362	Send/receive failure
.ABO	-15	361	Request terminated
.PRI	-16	360	Privilege violation
.RSU	-17	357	Shareable resource in use
.OVR	-18	356	Illegal overlay request
.BYT	-19	355	Odd byte count (or virtual address)
.BLK	-20	354	Logical Block Number too large
.MOD	-21	353	Invalid UDC module number
.CON	-22	352	UDC connect error
.NOD	-23	351	System dynamic memory
.DFU	-24	350	Device full
.IFU	-25	347	Index file full
.NSF	-26	346	No such file
.LCK	-27	345	Locked from read/write access
.HFU	-28	344	File header full
.WAC	-29	343	Accessed for write
.CKS	-30	342	File header checksum failure
.WAT	-31	341	Attribute control list format error

I/O ERROR CODES

Abbreviation	Error Number		Meaning
	Decimal	Octal	
.RER	-32	340	File processor device read error
.WER	-33	337	File processor device write error
.ALN	-34	336	File already accessed on LUN
.SNC	-35	335	File ID, file number check
.SOC	-36	334	File ID, sequence number check
.NLN	-37	333	No file accessed on LUN
.CLO	-38	332	File was not properly closed
.NBF	-39	331	No buffer space available for file
.RBG	-40	330	Illegal record size
.NBK	-41	327	File exceeds space allocated, no blocks
.ILL	-42	326	Illegal operation on file descriptor block
.BTP	-43	325	Bad record type
.RAC	-44	324	Illegal record access bits set
.RAT	-45	323	Illegal record attribute bits set
.RCN	-46	322	Illegal record number—too large
.ICE	-47	321	Internal consistency error
.2DV	-48	320	Rename—2 different devices
.FEX	-49	317	Rename—a new file name already in use
.BDR	-50	316	Bad directory file
.RNM	-51	315	Cannot rename old file system
.BDI	-52	314	Bad directory syntax
.FOP	-53	313	File already open
.BNM	-54	312	Bad file name
.BDV	-55	311	Bad device name
.BBE	-56	310	Bad block on device
.DUP	-57	307	Enter—duplicate entry in directory
.STK	-58	306	Not enough stack space (FCS or FCP)
.FHE	-59	305	Fatal hardware error on device
.NFI	-60	304	File ID was not specified
.ISQ	-61	303	Illegal sequential operation
.EOT	-62	302	End-of-tape detected
.BVR	-63	301	Bad version number
.BHD	-64	300	Bad file header
.OFL	-65	277	Device offline
.BCC	-66	276	Block check, CRC, or framing error
.ONL	-67	275	Device online
.NNN	-68	274	No such node

Abbreviation	Error Number		Meaning
	Decimal	Octal	
.NFW	-69	273	Path lost to partner
.BLB	-70	272	Bad logical buffer
.TMM	-71	271	Too many outstanding messages
.NDR	-72	270	No dynamic space available
.CNR	-73	267	Connection rejected
.TMO	-74	266	Time out on request
.EXP	-75	265	File expiration date not reached
.BTF	-76	264	Bad tape format
.NNC	-77	263	Not ANSI "D" format byte count
.NNL	-78	262	Not a network LUN
.NLK	-79	261	Task not linked to specified ICS/ICR interrupts
.NST	-80	260	Specified task not installed (DECnet)
.AST	-80	260	No AST specified in connect (AST)
.FLN	-81	257	Device offline when offline request was issued
.IES	-82	256	Invalid escape sequence
.PES	-83	255	Partial escape sequence
.ALC	-84	254	Allocation failure
.ULK	-85	253	Unlock error
.WCK	-86	252	Write check failure

For additional information, refer to the *IAS/RSX-11 I/O Operations Reference Manual*.



DIRECTIVE ERROR CODES

Directives in the directive status word (\$DSW) return the following error codes. The complete abbreviation for these codes is IE.xxx. Only partial abbreviations (xxx) are included on this list. The octal error number listed is the low-order byte of the complete word value (2's complement of the decimal).

Abbreviation	Error Number		Meaning
	Decimal	Octal	
.UPN	- 1	377	Insufficient dynamic storage
.INS	- 2	376	Specified task not installed
.PTS	- 3	375	Partition too small for task
.UNS	- 4	374	Insufficient dynamic storage for send
.ULN	- 5	373	Unassigned LUN
.HWR	- 6	372	Device driver not resident
.ACT	- 7	371	Task not active
.ITS	- 8	370	Directive inconsistent with task state
.FIX	- 9	367	Task already fixed/unfixed
.CKP	-10	366	Issuing task not checkpointable
.TCH	-11	365	Task is checkpointable
	-12		(reserved)

	-14		(reserved)
.RBS	-15	361	Receive buffer is too small
.PRI	-16	320	Privilege violation
.RSU	-17	357	Resource in use
.NSW	-18	356	No swap space available
.ILV	-19	355	Illegal vector specified

	-79		(reserved)
.AST	-80	260	Directive issued/not issued from AST
.MAP	-81	257	Illegal mapping specified
	-82	256	(reserved)
.IOP	-83	255	Window has I/O in progress
.ALG	-84	254	Alignment error
.WOV	-85	253	Address window allocation overflow
.NVR	-86	252	Invalid region ID
.NVW	-87	251	Invalid address window ID
.ITP	-88	250	Invalid TI parameter
.IBS	-89	247	Invalid send buffer size (greater than 255)

DIRECTIVE ERROR CODES

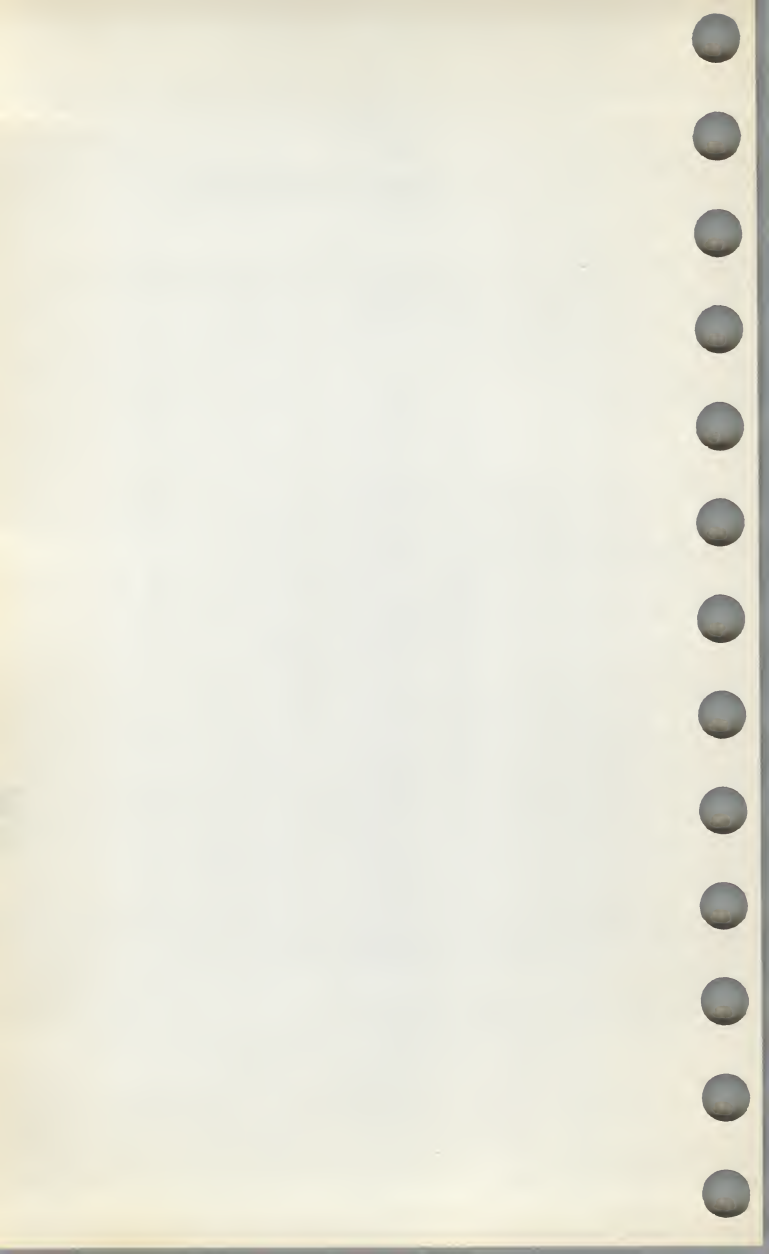
Abbreviation	Error Number		Meaning
	Decimal	Octal	
.LNL	-90	246	LUN locked in use
.IUI	-91	245	Invalid UIC
.IDU	-92	244	Invalid device or unit
.ITI	-93	243	Invalid time parameters
.PNS	-94	242	Partition/region not in system
.IPR	-95	241	Invalid priority (greater than 250)
.ILU	-96	240	Invalid LUN
.IEF	-97	237	Invalid event flag (greater than 64)
.ADP	-98	236	Part of DPB out of user's space
.SDP	-99	235	DIC or DPB size invalid

For additional information, refer to the *RSX-11M/M-PLUS Executive Reference Manual*.

ASCII CHARACTER SET

Octal Code	Character	Octal Code	Character	Octal Code	Character	Octal Code	Character
000	NUL	040	SP	100	@	140	\
001	SOH	041	!	101	A	141	a
002	STX	042	"	102	B	142	b
003	ETX	043	#	103	C	143	c
004	EOT	044	\$	104	D	144	d
005	ENQ	045	%	105	E	145	e
006	ACK	046	&	106	F	146	f
007	BEL	047	'	107	G	147	g
010	BS	050	(	110	H	150	h
011	HT	051	)	111	I	151	i
012	LF	052	*	112	J	152	j
013	VT	053	+	113	K	153	k
014	FF	054	,	114	L	154	l
015	CR	055	-	115	M	155	m
016	SO	056	.	116	N	156	n
017	SI	057	/	117	O	157	o
020	DLE	060	0	120	P	160	p
021	DC1	061	1	121	Q	161	q
022	DC2	062	2	122	R	162	r
023	DC3	063	3	123	S	163	s
024	DC4	064	4	124	T	164	t
025	NAK	065	5	125	U	165	u
026	SYN	066	6	126	V	166	v
027	ETB	067	7	127	W	167	w
030	CAN	070	8	130	X	170	x
031	EM	071	9	131	Y	171	y
032	SUB	072	:	132	Z	172	z
033	ESC	073	;	133	[	173	{
034	FS	074	<	134	\	174	|
035	GS	075	=	135	]	175	}
036	RS	076	>	136	^	176	~
037	US	077	?	137	_	177	DEL

*Equivalent to the Radix-50 character set.



RADIX-50 CONVERSION TABLE

To convert one to three characters to their Radix-50, 6-digit octal equivalent, add the appropriate octal codes from the following table, based on the positions of the characters in the string (that is, first, second, or third).

Character Set	First Character Code	Second Character Code	Third Character Code
Space	000000	000000	000000
A	003100	000050	000001
B	006200	000120	000002
C	011300	000170	000003
D	014400	000240	000004
E	017500	000310	000005
F	022600	000360	000006
G	025700	000430	000007
H	031000	000500	000010
I	034100	000550	000011
J	037200	000620	000012
K	042300	000670	000013
L	045400	000740	000014
M	050500	001010	000015
N	053600	001060	000016
O	056700	001130	000017
P	062000	001200	000020
Q	065100	001250	000021
R	070200	001320	000022
S	073300	001370	000023
T	076400	001440	000024
U	101500	001510	000025
V	104600	001560	000026
W	107700	001630	000027
X	113000	001700	000030
Y	116100	001750	000031
Z	121200	002020	000032
\$	124300	002070	000033
.	127400	002140	000034

RADIX-50 CONVERSION TABLE

Character Set	First Character Code	Second Character Code	Third Character Code
Unused	132500	002210	000035
0	135600	002260	000036
1	140700	002330	000037
2	144000	002400	000040
3	147100	002450	000041
4	152200	002520	000042
5	155300	002570	000043
6	160400	002640	000044
7	163500	002710	000045
8	166600	002760	000046
9	171700	003030	000047

OCTAL/DECIMAL CONVERSION TABLE

Bits	Octal	Decimal
15	100000	32768
	0	0
	70000	28672
	60000	24576
14	50000	20480
13	40000	16384
12	30000	12288
	20000	8192
	10000	4096
	0	0
	7000	3584
	6000	3072
11	5000	2560
10	4000	2048
9	3000	1536
	2000	1024
	1000	512
	0	0
	700	448
	600	384
8	500	328
7	400	256
6	300	192
	200	128
	100	64
	0	0
	70	56
	60	48
5	50	40
4	40	32
3	30	24
	20	16
	10	8
	0	0
	7	7
	6	6
2	5	5
1	4	4
0	3	3
	2	2
	1	1
	0	0

Octal to Decimal

For each position of the octal value, locate the octal digit and its decimal equivalent in the conversion table. Add the decimal equivalents to obtain the decimal value.

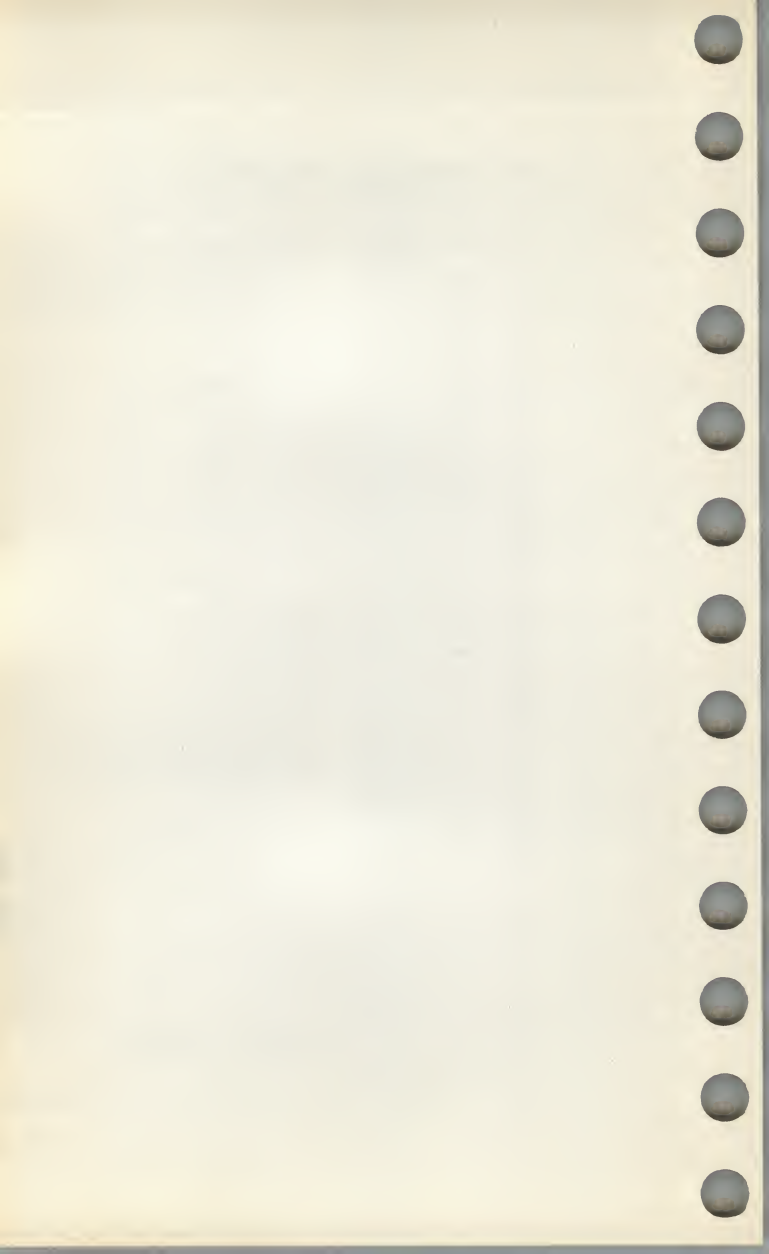
Example:

$$\begin{array}{rcl}
 53702(8) & = & ?(10) \\
 n(8) & n(10) & \\
 50000 & = & 20480 \\
 3000 & = & 1536 \\
 700 & = & 488 \\
 00 & = & 00 \\
 \hline
 2 & = & 2 \\
 53702(8) & = & 22466(10)
 \end{array}$$

Decimal to Octal

Locate in the conversion table the decimal value closest to, but not exceeding, the decimal value to be converted. Record the octal equivalent. Subtract the table decimal value from the decimal value to be converted. Repeat the process until the subtraction balance equals 0. Add the octal equivalents to obtain the octal value.

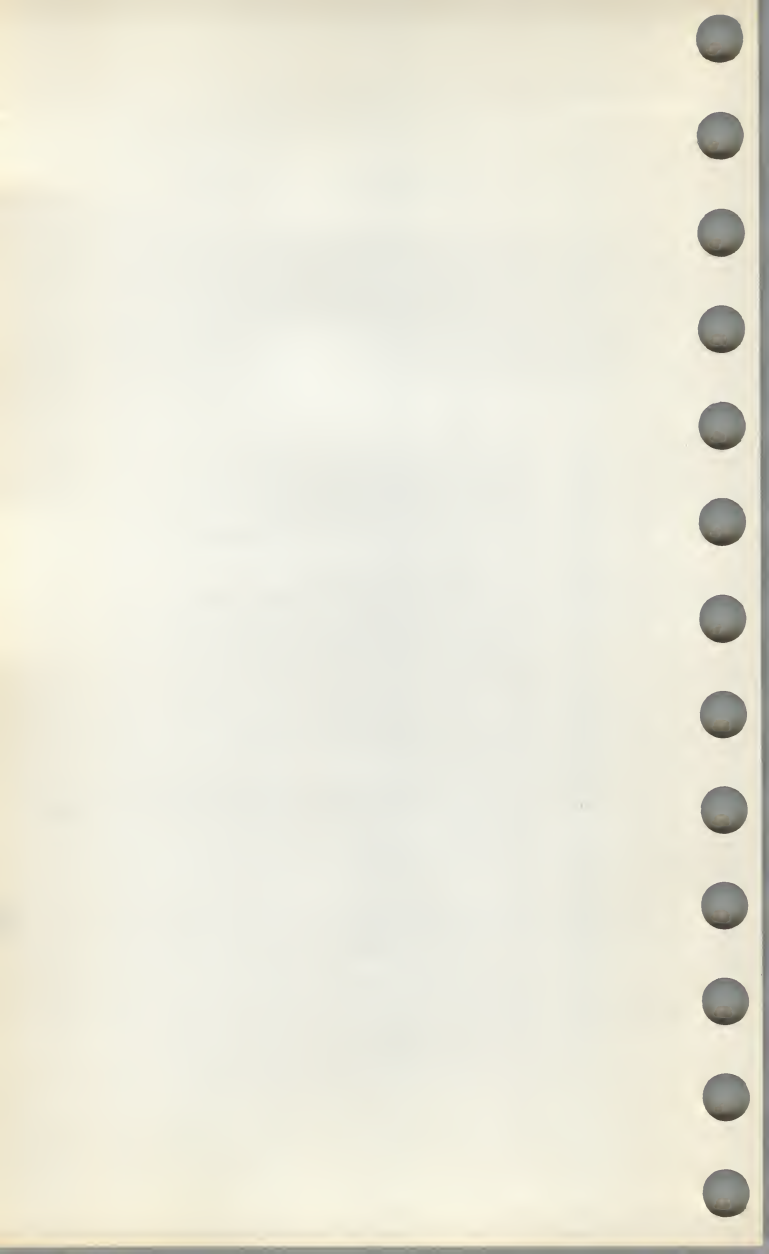
$$\begin{array}{rcl}
 \text{Example:} & 22466(10) = & ?(8) \\
 & n(10) = & n(8) \\
 & & 22466 \\
 20480 & = & 50000 & \underline{- 20480} \\
 & & & 1986 \\
 1536 & = & 3000 & \underline{- 1536} \\
 & & & 450 \\
 448 & = & 700 & \underline{- 448} \\
 & & & 2 \\
 \hline
 2 & = & 2 & \underline{- 2} \\
 22466(10) = & 53702(8) = & 0
 \end{array}$$



STANDARD FILE TYPES

RSX-11M-PLUS uses the standard 3-letter file types used by all DIGITAL-supplied software. These names indicate the actual contents of the files. Although any combination of three letters can be used, DIGITAL recommends that the standard types be used whenever possible. (Compilers and other system programs that refer to these file types look for the standard name as a default. For example, if the command FOR ADD = ADD is issued, the FORTRAN-IV compiler looks for ADD.FTN and if the file is named ADD.FOR, the compiler reports that there is no such file.)

Type	File Contents
.BAS	A BASIC-11 language source program
.B2S	A BASIC-PLUS-II language source program
.CBL	A COBOL language source program
.CMD	MCR or task commands (an indirect command file)
.COR	A SLP correction file
.DAT	Data (as opposed to a program)
.DIR	A directory (for example, a User File Directory)
.DOC	A RUNOFF output file
.FTN	A FORTRAN IV or FORTRAN IV-PLUS language source program
.LST	A listing file
.MAC	A MACRO-11 source program
.MAP	A Task Builder memory allocation map
.MLB	A macro library
.MSG	A FORTRAN run-time error message file
.OBJ	An object program (output from either the MACRO-11 Assembler or a compiler)
.ODL	A Task Builder overlay descriptor
.OLB	An object module library
.RNO	A RUNOFF input file
.SML	The system macro library
.SYS	A bootable system image
.TMP	A temporary file
.TSK	A task image file
.TXT	A text file
.ULB	A universal file library



Digital LA-120 Decwriter :

* voor wijziging terminalparameters :

1/ SET UP + CTRL } LED SET-UP
3/ wijziging } KNIPPERT
3/ SET UP

mogelijke wijzigingen:

+ TOP OF FORM (TOF) : SHIFT 4

+ CHARACTERS PER INCH:

* H display geeft 5, 6, 7, 8, 10, 12, 13, 16 aan = aantal characters per inch
elke nieuwe H geeft de volgende keuze

+ LEFT / RIGHT MARGIN:

* 7 wist ~~het~~ margius
positioneer kop; 5 links
6 rechts

+ AUTO REPEAT

* R geeft huidige status: 1=aan
0=uit

* R wijzigt status.

+ BELL VOLUME

* G : huidige volume

1 = hoog
0 = laag

* G : wijzigt volume

+ Key click

* **[K]** : huidige status

0 = uit

1 = aan

* **[K]** : wijzig status

Voor fabriek defaults:

* **[I]**

om eigen waarden op te slaan:

* **[9]** + **[SHIFT]** (bij hernieuwd
inschakelen autom.
opgeroepen)

om eigen waarden op te roepen:

* **[9]**

NOTES

